Hernandez
Environmental
Services

# GENERAL BIOLOGICAL ASSESSMENT
# FOR
# ASSESSOR'S PARCEL NUMBERS
# 0281-301-17, 20, 21, 0281-311-06, 07, 08, 11, 12, 18, AND 19

## CITY OF SAN BERNARDINO, SAN BERNARDINO COUNTY, CALIFORNIA

**Prepared for:**

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# 1.0 Introduction

Hernandez Environmental Services (HES) was retained by EPD Solutions, Inc. to perform a General Biological Assessment (GBA) on an approximately 7.67-acre site comprised of Assessor's Parcel Numbers (APNs) 0281-301-17, 20, 21, 0281-311-06, 07, 08, 11, 12, 18, and 19. The purpose of the GBA is to document the presence/absence of sensitive resources that may be present on the site, to document existing habitats, and generally address biological questions that may be needed for project approval. This GBA will present the results obtained from the field survey and will provide recommendations that may be needed to mitigate potential biological impacts from project activities.

## 1.1 Project Location

The proposed project site is located north of East Brier Drive, south of Southern California Regional Rail A, east of South Gilford Avenue, and west of South Tippecanoe Avenue within the City of San Bernardino, San Bernardino County, California (Figures 1 and 2, *Location Map* and *Vicinity Map*). Specifically, the project site is located within the San Bernardino land grant of the *San Bernardino South* United States Geological Survey (USGS) 7.5-minute topographic quadrangle. The project site center point latitude and longitude are 34°04'20.3714" North and 117°15'51.2794" West.

## 1.2 Project Description

The proposed project consists of the construction of five new facilities for business commercial use and associated features, including parking lots, landscaping, and bioretention basins (Figure 3, *Project Plans*). The proposed development is expected to impact the entire 7.67 acres.

# 2.0 Methodology

## 2.1 Literature Review

HES conducted a literature review and reviewed aerial photographs and topographic maps of the project location and surrounding areas. The following USGS quads were used to query the California Natural Diversity Database (CNDDB): *San Bernardino South, Fontana, Devore, San Bernardino North, Harrison Mtn, Redlands, Sunnymead, Riverside East,* and *Riverside West*. The United States Fish and Wildlife Service (USFWS) County Endangered Species Lists and California Native Plant Society (CNPS) Rare Plant Inventory were reviewed to obtain species information for the project area.



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### 2.2 Field Survey

On November 5, 2021, HES conducted a field survey of the approximate 7.67-acre project site. Ambient temperature at 8:50 A.M. was 61° Fahrenheit, 5 percent cloud cover, with winds ranging from 0 to 1 mile per hour from the west. The purpose of the field survey was to document the existing habitat conditions, obtain plant and animal species information, view the surrounding uses, assess the potential for state and federal waters, assess the potential for wildlife movement corridors, and assess for the presence of critical habitat constituent elements.

The entire 7.67-acre project site was surveyed. Linear transects approximately 50 feet apart were walked for 100 percent coverage. All species observed were recorded and Global Positioning System (GPS) way points were taken to delineate specific habitat types, species locations, state or federal waters, or any other information that would be useful for the assessment of the project site. A comprehensive list of all plant and wildlife species that were detected during the field survey within the project site is included in Appendix A, *Observed Species List*. Sensitive plant and wildlife species with the potential to occur within the project area are listed in Appendix B, *Potential Species List*. Representative site photographs were taken and are included within Appendix C, *Site Photographs*.

## 3.0 Results

### 3.1 Environmental Setting

The project site consists predominantly of ruderal land characterized by sparse vegetation. The project site is bordered by commercial and industrial development in all directions, including adjacent parking lots and a railroad. The project site is split into three individual areas with East Hardt Street in the middle, but not included within property boundaries. The site is flat with elevations ranging from 1,046 feet above mean sea level (AMSL) to 1,053 feet AMSL.

### 3.2 Soils

According to the USDA Web Soil Survey, soil at the project site is classified as Grangeville fine sandy loam (Gs), saline-alkali (Appendix D, *Soils Map*).

### 3.3 Habitat Communities

The predominant habitat type within project boundaries is ruderal (Figure 4, *Habitat Map*). Following is a description of this habitat type:



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*Ruderal*
Approximately 7.67 acres of ruderal habitat occur within the project site. This habitat is characterized by the growth of new vegetation on recently disturbed land and a sparse shrub layer. Species found in this habitat are flat-spine burr ragweed (*Ambrosia acanthicarpa*), jimsonweed (*Datura stramonium*), common sunflower (*Helianthus annuus*), telegraphweed (*Heterotheca grandiflora*), and puncture vine (*Tribulus terrestris*).

## 3.4 Sensitive Biological Resources

A total of 56 sensitive species of plants and 65 sensitive species of animals has the potential to occur on or within the vicinity of the project location. These include those species listed or candidates for listing by the U. S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS) and Bureau of Land Management (BLM). All habitats utilized by these species was evaluated during the site visit and a determination has been made for the presence or probability of presence in this report. This section will address those species listed as Candidate, Rare, Threatened, or Endangered under the state and federal endangered species laws or directed to be evaluated under other state, county, or municipal regulations. Other special status species will be reported in Appendix B, *Potential Species List*.

### 3.4.1 Special Status Plants

Fourteen plant species are listed as state and/or federally Threatened, Endangered, Candidate, Rare, or as 1B.1 in the CNPS Rare Plan Inventory. The following is a description of these species:

*San Diego ambrosia*
San Diego ambrosia (*Ambrosia pumila*) is a federally Endangered Species and ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes wetlands in chaparral, coastal sage scrub, valley and foothill grassland. It is commonly found in sandy loam or clay soil and sometimes in alkaline soils. This species persists where disturbance has been superficial. It is also sometimes found on margins or near vernal pools. No habitat for this species is present on the project site. **This species is not present.**

*Marsh sandwort*
Marsh sandwort (*Arenaria paludicola*) is a federally and state listed Endangered Species and ranked 1B.1 in the CNPS Rare Plant Inventory. It is found in freshwater marsh, wetland, and marsh and swamp habitats. No habitat for this species is present on the project site. **This species is not present.**



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*Horn's milk-vetch*
Horn's milk-vetch (*Astragalus hornii var. hornii*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is typically found in alkali playa, meadow, seep, and wetland habitats. No habitat for this species is present on the project site. **This species is not present.**

*Nevin's barberry*
Nevin's barberry (*Berberis nevinii*) is a federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. It is typically found on steep, north facing slopes or in low grade sandy washes. Its habitat includes chaparral, cismontane woodland, coastal scrub, and riparian scrub. No habitat for this species is present on the project site. **This species is not present.**

*Thread-leaved brodiaea*
Thread-leaved brodiaea (*Brodiaea filifolia*) is a federally Threatened and state Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. This species is usually associated with annual grassland and vernal pools and is often surrounded by shrubland habitats. Its habitats include chaparral, cismontane woodlands, coastal sage scrub, valley and foothill grasslands, vernal pools and wetland. No habitat for this species is present on the project site. **This species is not present.**

*Smooth tarplant*
Smooth tarplant (*Centromadia pungens ssp. laevis*) is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes alkali playa, chenopod scrub, meadows and seeps, riparian woodlands, wetlands, and valley and foothill grasslands. It is commonly found in alkali meadow, alkali scrub, and disturbed habitat. Historic data found that this species was observed on the project site in 2003. Focused botanical surveys found approximately 300 individuals, with the majority concentrated in the northern of the three parcels (Appendix E). **This species is present.**

*Salt marsh bird's-beak*
Salt marsh bird's-beak (*Chloropyron maritimum ssp. maritimum*) is a federally and state listed Endangered Species. This species is limited to the higher zones of salt marsh habitat at elevations of less than ten meters. Its habitat includes coastal dunes, marsh and swamp, salt marsh, and wetland. No habitat for this species is present on the project site. **This species is not present.**

*Parry's spineflower*
Parry's spineflower (*Chorizanthe parryi var. parryi*) is ranked 1B.1 in the CNPS Rare Plant Inventory. The species occurs in dry, sandy soils on dry slopes and flats, sometimes at the interface of two vegetations types, such as chaparral and oak woodland. Its habitat includes coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. No habitat for this species is



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present on the project site. **This species is not present.**

*Slender-horned spineflower*
Slender-horned spineflower (*Dodecahema leptoceras*) is a federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. This species is typically found near flood deposited terraces and washes. Its habitat includes chaparral, cismontane woodland, and coastal scrub (alluvial fan sage scrub). No habitat for this species is present on the project site. **This species is not present.**

*Santa Ana River woollystar*
Santa Ana River woollystar (*Eriastrum densifolium ssp. sanctorum*) is a federally and state listed Endangered Species and is ranked 1B.1 in the CNPS Rare Plant Inventory. It is typically found in sandy soils on river floodplains or terraced fluvial deposits. Its habitat includes chaparral and coastal scrub. No habitat for this species is present on the project site. **This species is not present.**

*Mesa horkelia*
Mesa horkelia (*Horkelia cuneate var. puberula*) is ranked 1B.1 in the CNPS Rare Plant Inventory. It is typically found in sandy or gravelly sites. Its habitat includes chaparral, cismontane woodland, and coastal scrub. No habitat for this species is present on the project site. **This species is not present.**

*Coulter's goldfields*
Coulter's goldfields (*Lasthenia glabrata ssp.coulteri*) is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes alkali playas, marsh, swamp, salt marsh, vernal pool, and wetland. It is usually found on alkaline soils in playas, sinks, and grasslands. No habitat for this species is present on the project site. **This species is not present.**

*Gambel's water cress*
Gambel's water cress (*Nasturtium gambelii*) is a federally listed Endangered Species, a state listed Threatened Species, and is ranked 1B.1 in the CNPS Rare Plant Inventory. It is found in freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. Its habitat includes brackish marsh, freshwater marsh, marsh and swamp, and wetland. No habitat for this species is present on the project site. **This species is not present.**

*Brand's star phacelia*
Brand's star phacelia (*Phacelia stellaris*) is ranked 1B.1 in the CNPS Rare Plant Inventory. Its habitat includes coastal dunes and coastal scrub. No habitat for this species is present on the project site. **This species is not present.**



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### 3.4.2 Sensitive Wildlife

A total of nineteen wildlife species are listed as state and/or federal threatened, endangered, or candidate species. Sensitive species which have a potential to occur will also be discussed in this section. All sensitive species within a 5-mile radius of project area were reviewed and a complete list of those species are discussed in in Appendix B, *Potential Species List*.

*Tricolored blackbird*
Tricolored blackbird (*Agelaius tricolor)* is a state listed Threatened Species and listed by the CDFW as a Species of Special Concern. Its habitat includes freshwater marsh, marsh and swamp, swamp, and wetland. This species is largely endemic to California and is most numerous in and around Central Valley. This species requires open accessible water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony. There is no habitat for this species on the project site. **This species is not present.**

*Burrowing owl*
Burrowing owl (*Athene cunicularia*) is a CDFW Species of Special Concern. Its habitat includes coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran Desert scrub, and valley and foothill grassland. This species is typically found in open and dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. It is a subterranean nester and is dependent upon burrowing mammals, most notably the California ground squirrel. The project site was evaluated for its potential to hold suitable burrowing owl habitat. No burrows or suitable habitat were found on site, and there is urban development surrounding the site in all directions. **This species is not present.**

*Swainson's hawk*
Swainson's hawk (*Buteo swainsoni*) is a state listed Threatened Species. This species favors open grasslands for foraging but also occurs in agricultural settings. It relies on scattered stands of trees near agricultural fields and grasslands for nesting sites. Its habitats include great basin grassland, riparian forest, riparian woodland, and valley and foothill grassland. No habitat for this species is present on the project site. **This species is not present.**

*Santa Ana sucker*
Santa Ana sucker (*Catostomus santaanae*) is a federally listed Threatened Species. Its habitat includes aquatic and south coast flowing waters. This species prefers sand-rubble-boulder bottoms, cool and clear water, and algae. It is endemic to Los Angeles Basin south coastal streams. No habitat for this species is present on the project site. **This species is not present.**



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*Southern rubber boa*
Southern rubber boa (*Charina umbratica*) is a state Threatened Species. It is known to inhabit a variety of forest habitats from the San Bernardino and San Jacinto Mountains. This species resides near streams or wet meadows and requires loose, moist soil for burrowing. The project site does not contain suitable habitat for this species. **This species is not present.**

*Western yellow-billed cuckoo*
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a federally listed Threatened and state listed Endangered Species. This species typically nests in riparian jungles of willows, often mixed with cottonwoods, with a lower story of blackberry, nettles, or wild grape. It is found in riparian forest habitat. The project site does not contain suitable habitat for this species. **This species is not present.**

*San Bernardino kangaroo rat*
San Bernardino kangaroo rat (*Dipodomys merriami parvus*) is a federally listed Endangered Species, a state Candidate Endangered Species, and a CDFW Species of Special Concern. It is found in coastal scrub habitat. This species is found in alluvial scrub vegetation on sandy loam substrates, characteristic of alluvial fans and flood plains. It needs early to intermediate seral stages. No habitat for this species is present on the project site. **This species is not present.**

*Stephens' kangaroo rat*
Stephens' kangaroo rat (*Dipodomys stephensi*) is a federally listed Endangered Species and state listed Threatened Species. This species is found in coastal sage scrub with sparse vegetation cover, and in valley and foothill grasslands. This species prefers buckwheat, chamise, brome grass, and filaree, and will burrow into firm soil. The project site does not contain suitable habitat for this species. **This species is not present.**

*Southwestern willow flycatcher*
Southwestern willow flycatcher (*Empidonax traillii extimus*) is a federally and state listed Endangered Species. It is found in riparian woodland habitat in southern California. The project site does not contain suitable habitat for this species. **This species is not present.**

*Quino checkerspot butterfly*
Quino checkerspot butterfly (*Euphydryas editha quino*) is a federally listed Endangered Species. It is found in chaparral and coastal sage scrub. This species requires high densities of food plants, including *Plantago erecta*, *P. insularis*, and *Orthocarpus purpurescens*. The project site does not have suitable habitat for this species. **This species is not present.**

*Bald eagle*
Bald eagle (*Haliaeetus leucocephalus*) is a state listed Endangered Species and CDFW Fully Protected Species. This species is found in lower montane coniferous forest and old-growth. They nest in large old-growth or tress with open branches, especially ponderosa pine. The project site does not contain suitable habitat for this species. **This species is not present.**

*California black rail*
California black rail (*Laterallus jamaicensis coturniculus*) is a state listed Threatened Species and a CDFW Fully Protected Species. It inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. This species needs water depths of about one inch that do not fluctuate throughout the year and dense vegetation for nesting habitat. Its habitat includes brackish marsh, freshwater marsh, marsh and swamp, salt marsh, and wetland. No habitat for this species is present on the project site. **This species is not present.**

*Steelhead – southern California DPS*
Steelhead-southern California DPS (*Oncorhynchus mykiss irideus pop. 10*) is a federally listed Endangered Species. This species is likely to have greater physiological tolerances to warmer water and more variable conditions. Its habitats include aquatic and south coast flowing waters. No habitat for this species is present on the project site. **This species is not present.**

*Coastal California gnatcatcher*
Coastal California gnatcatcher (*Polioptila californica californica*) is a federally listed Threatened Species and CDFW Species of Special Concern. This species is found in coastal bluff scrub and coastal scrub habitat. This species is typically found in low, coastal sage scrub in arid washes, on mesas and slopes. The project site does not contain suitable habitat for this species. **This species is not present.**

*California red-legged frog*
California red-legged frog (*Rana draytonii*) is a federally listed Threatened Species and a CDFW Species of Special Concern. Its habitat includes aquatic, artificial flowing waters, artificial standing waters, freshwater marsh, marsh and swamp, riparian forest, riparian scrub, riparian woodland, Sacramento, and San Joaquin flowing and standing waters, and south coast. It requires 11 to 20 weeks for larval development and must have access to estivation habitat. It is commonly found in lowlands and foothills, in or near permanent sources of deep water, with dense, shrubby, or emergent riparian vegetation. The project site does not contain suitable habitat for this species. **This species is not present.**

*Southern mountain yellow-legged frog*
Southern mountain yellow-legged frog (*Rana muscosa*) is a federally and state listed Endangered Species and a CDFW Watch List Species. It is found in aquatic habitat. This species is always encountered within a few feet of water. Tadpoles may require two to four years to complete their aquatic development. The project site does not contain suitable habitat for this species. **This species is not present.**

*Dehli Sands flower-loving fly*
Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*) is a federally listed Endangered Species. It requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. It is found only in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside counties. This species is found in interior dune habitat. The project site does not contain suitable habitat for this species. **This species is not present.**

*Riverside fairy shrimp*
Riverside fairy shrimp (*Streptocephalus woottoni*) is a federally listed Endangered Species. This species is found in coastal scrub, valley and foothill grassland, vernal pool, and wetland habitat. This species typically inhabits seasonally astatic pools filled by winter/spring rains. It is endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales, or earth slump basins in grassland and coastal sage scrub habitat. The project site does not contain suitable habitat for this species. **This species is not present.**

*Least Bell's vireo*
Least Bell's vireo (*Vireo bellii pusillus)* is a federally and state listed Endangered Species. This species is found in riparian forest, riparian scrub, and riparian woodland. Nesting habitat of this species is restricted to willow and/or mulefat dominated riparian scrub along permanent or nearly permanent streams. The project site does not contain suitable habitat for this species. **This species is not present.**

## 3.5 Critical Habitat

The proposed project site is not located within any designated federal critical habitat. The closest federal critical habitat is San Bernardino kangaroo rat critical habitat located 0.23 miles north of the project site within the Santa Ana River. The San Bernardino kangaroo rat inhabits alluvial coastal scrub vegetation. No suitable habitat is present on the project site.

## 3.6 Migratory Nesting Birds

Migratory non-game native bird species are protected under the federal Migratory Bird Treaty Act.



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Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests. The study area has shrubs that can be used by nesting songbirds during the nesting bird season of February 1 to September 15.

### 3.7 Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbances. The project site was evaluated for its function as a wildlife corridor that species would use to move between wildlife habitat zones. Usually, mountain canyons or riparian corridors are used by wildlife as corridors. The project site is flat and surrounded by urban development. No wildlife movement corridors were found to be present on the project site.

### 3.8 Other City, County, Regional, State, or Federal Conservation Plans

The proposed project would not be anticipated to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 3.9 Jurisdictional Waters

The project area does not contain any state or federal jurisdictional drainages.

## 4.0 Project Impacts

### 4.1 Impacts to Habitat Types

The proposed project will impact the entire 7.67-acre site consisting of ruderal habitat.

### 4.2 Impacts to Sensitive Species

Onsite habitat is primarily ruderal with sparse non-native vegetation. No habitat for sensitive species occurs within project boundaries; therefore, impacts to sensitive plant or wildlife species are not expected to occur.

Smooth tarplant, a CNPS ranked 1.B1 species, was documented on the project site during focused surveys. Smooth tarplant is not state or federally listed as Threatened or Endangered. There are no City or regional protections, policies, or removal requirements for this species: therefore, mitigation for impacts to this species would not be required.



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### 4.3 Impacts to Critical Habitat

The proposed project site is not located within any designated federal critical habitat. The closest federal critical habitat is San Bernardino kangaroo rat critical habitat located 0.23 miles north of the project site within the Santa Ana River. No impacts to federal critical habitat are expected to occur.

### 4.4 Impacts to Migratory Nesting Birds

Migratory nongame native bird species are protected under the federal Migratory Bird Treaty Act. Additionally, Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests. If vegetation removal and other ground disturbance activities can be conducted outside of the recognized nesting bird season (February 15 through September 15), impacts to nesting birds is not expected.

If work cannot be avoided during the nesting bird season, prior to initiation of project activities that would remove vegetation or otherwise disturb nesting activity (for instance, mobilization of heavy equipment), work associated with project activities have the potential to impact nesting birds.

### 4.5 Impacts to Jurisdictional Waters

No jurisdictional waters are present on the project site. Therefore, no impacts to state or federal jurisdictional waters are expected to occur.

## 5.0 Recommendations

Based upon the findings of this report, it is recommended that the following measures be implemented as part of the project to avoid and/or minimize anticipated impacts from project activities:

<u>Nesting Birds</u>

- If ground disturbing and vegetation clearing activities cannot be avoided during the nesting bird season (February 15 through September 15), a qualified biologist should conduct a pre-construction nesting bird survey within all areas of breeding/nesting habitat within and adjacent to the project site prior to initiation of project activities that would remove vegetation or otherwise disturb nesting activity (for instance, mobilization of heavy equipment). Surveys should be conducted not more than 3 days prior to initiation of activities.



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- If nesting birds are encountered, a qualified biologist will establish an avoidance buffer zone around the nest (buffer zones vary according to species involved and shall be determined by the qualified biologist). No activities that would adversely affect the nest shall occur within the buffer zone until the qualified biologist has determined the nest is no longer active and the young are no longer dependent on the nest.



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## 6.0 CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date 07-15-2023 Signed _____

PROJECT MANAGER

Fieldwork Performed By:

Sarah Vasquez

ASSOCIATE BIOLOGIST

Elizabeth Gonzalez

ASSOCIATE BIOLOGIST



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## 7.0 REFERENCES

American Ornithologists' Union. 1983 (and supplements 1985, 1987, 1989, 1991, 1993, and 1995). *The A.O.U. Check-List of North American Birds.* 6th ed. Allen Press. Lawrence, Kansas.

Burt, W.H., and Grossenheider, R.P., 1980. *Peterson Field Guides, Mammals.* Houghton Mifflin Company. New York, New York.

CDFG (California Department of Fish and Game). 1988a. *California's wildlife, Volume I: Amphibians and Reptiles.* State of California Resources Agency. Sacramento, California.

CDFG (California Department of Fish and Game). 1988b. *California's Wildlife, Volume II: Birds.* State of California's Resource Agency. Sacramento, California.

CDFG (California Department of Fish and Game). 1988c. *California's Wildlife, Volume III: Mammals*. State of California Resources Agency. Sacramento, California.

CDFG (California Department of Fish and Game). 2014 (October). *Natural Communities List.* The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2014 (October*). Endangered and Threatened Animals List.* The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2014 (October). *Endangered Threatened and Rare Plants.* The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2014 (October). *Special Animals List* . The Resources Agency of California, Department of Fish and Game, Natural Diversity Data Base. Sacramento, California.

CDFG (California Department of Fish and Game). 2015. RareFind On-line program. Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species California Department of Fish and Game, State of California Resources Agency. Sacramento,

California.

CDFW (California Department of Fish and Wildlife). 2018. *CNDDB MGS Data. The Conservation Strategy for the Mohave Ground Squirrel*. The Resources Agency of California, Department of Fish and Wildlife, Natural Diversity Data Base. Sacramento, California.

Department of the Army. 1986 (Nov 13). 33 CFR Parts 320 Through 330, Regulatory Programs of the Corps of Engineers; Final Rule. Federal Register 51(219):41206-41206.

Department of the Army. 2000 (Mar 9). 33 CFR Parts 320 Through 330, Regulatory Programs of the Corps of Engineers; Final Rule. Federal Register 65(47):12818-12899.

Department of the Army. 2002 (Jan 15). 33 CFR Parts 320 Through 330, Regulatory Programs of the Corps of Engineers; Final Rule. Federal Register 67(10):20020-2095.

Hickman, J.C. 1993. The *Jepson Manual: Higher Plants of California*. University of California Press. Berkeley, California.

Holland, R.F. 1986 (updated 1996). *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program. California Department of Fish and Game. Sacramento, California.

Munz, P.A. 1974. *A Flora of Southern California.* University of California Press. Berkeley, California.

Sawyer, J.O. and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society. Sacramento, California.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California.* Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

Stebbins, R.C. 2003. *A Field Guide to Western Reptiles and Amphibians*. 2nd ed. Houghton Mifflin Company. Boston, Massachusetts.

Tibor, D.P. 2001. California *Native Plant Society's Inventory of Rare and Endangered Plants of California*. California Native Plant Society. Special Publication, No. 1, 6th ed.

Udvardy, M.D. 1994. *National Audubon Society Field Guide to North American Birds.* Alfred A. Knopf, Inc. New York, New York.

USFWS (United States Fish and Wildlife Service). 2008. *Draft revised recovery plan for the Mojave population of the desert tortoise (Gopherus agassizii)*. U.S. Fish and Wildlife Service, California and Nevada Region, Sacramento, California. 209 pp.

USFWS (United States Fish and Wildlife Service). 1993 (Sep 30). *Plant Taxa for Listing as Endangered or Threatened Species; Notice of Review*. Federal Register 50 CFR Part 17. U.S. Department of the Interior. Washington, D.C.

USFWS (United States Fish and Wildlife Service). 1994 (Nov 15*). Endangered or Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species.* Federal Register 50 CFR Part 17. U.S. Department of the Interior. Washington, D.C.

USFWS (United States Fish and Wildlife Service). 1997c (Oct. 31*). Endangered or Threatened Wildlife and Plants.* Federal Register 50 CFR Part 17. U.S. Department of the Interior. Washington, D.C.

# FIGURES

**Figure 1**

Location Map
Hardt & Brier
San Bernardino County, California

**Legend**

Project Site Boundary

N

**Figure 2**

Vicinity Map
Hardt & Brier
San Bernardino County, California

**Legend**

Project Site Boundary

N

## LEGAL DESCRIPTION

PARCELS 29 & 30 OF PARCEL MAP NO. 5464
FILED IN SAN BERNARDING COUNTY

APN: 0281-311-17 & 08

ADDRESS: HARDT STREET

USE: SHELL

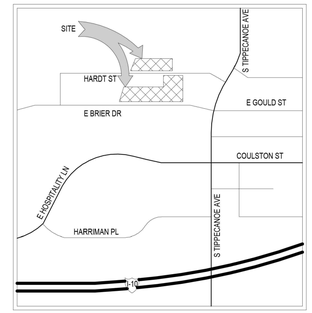
ZONE: TOD CR-3

## SITE INFORMATION

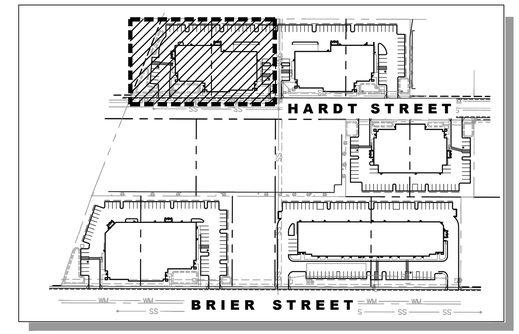
| | | |
|---|---|---|
| SITE AREA: | 54,315 SF | 1.25 ACRES |
| PROPOSED BUILDING COVERAGE: | 17,580 SF | 32.37 % |
| PROPOSED LANDSCAPE AREA: | 14,206 SF | 26.15 % |
| PROPOSED PAVING AREA: | 22,529 SF | 41.48 % |

TYPE OF DEVELOPMENT: SHELL

VICINITY MAP




KEY MAP




North
NTS

| (a) Hydrozone Category | PF- Plant Factor |
|---|---|
| Very Low Water Use | 0.0 - 0.1 |
| Low Water Use* | 0.2 - 0.3 |
| Moderate Water Use | 0.4 - 0.6 |
| High Water Use | 0.7 - 1.0 |

*Artificial turf and temporarily irrigated areas are considered Low Water Use.

| (b) Irrigation Method | (c) IE- Irrigation Efficiency |
|---|---|
| Filler Pipe for Pools/Spas | 1.00 |
| Drip/Subsurface | 0.90 |
| Bubblers | 0.85 |
| Rotors | 0.75 |
| Rotators | 0.70 |
| Overhead Spray | 0.60 |

**(d)**
**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

**ETo** - see Appendix A in Water Efficient Land: Design Manual. **(ETO = 55.1)**
**0.62** is the conversion factor to gallons per sq. ft.
**ETAF** is Plant Factor/Irrigation Efficiency.
**Area** is the Landscaped Area for each hydrozone.

**(e)**
**MAWA (Annual Gallons Allowed) =**
***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]***

**LA** is the total landscape of all hydrozone areas in sq. ft.
**SLA** is the total special landscape area in square feet.
**ETAF** is 0.42 for all areas

### WATER EFFICIENT LANDSCAPE WORKSHEET

**Building 'A'**

**REFERENCE EVAPOTRANSPIRATION (ETo)____ 55.1**

**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

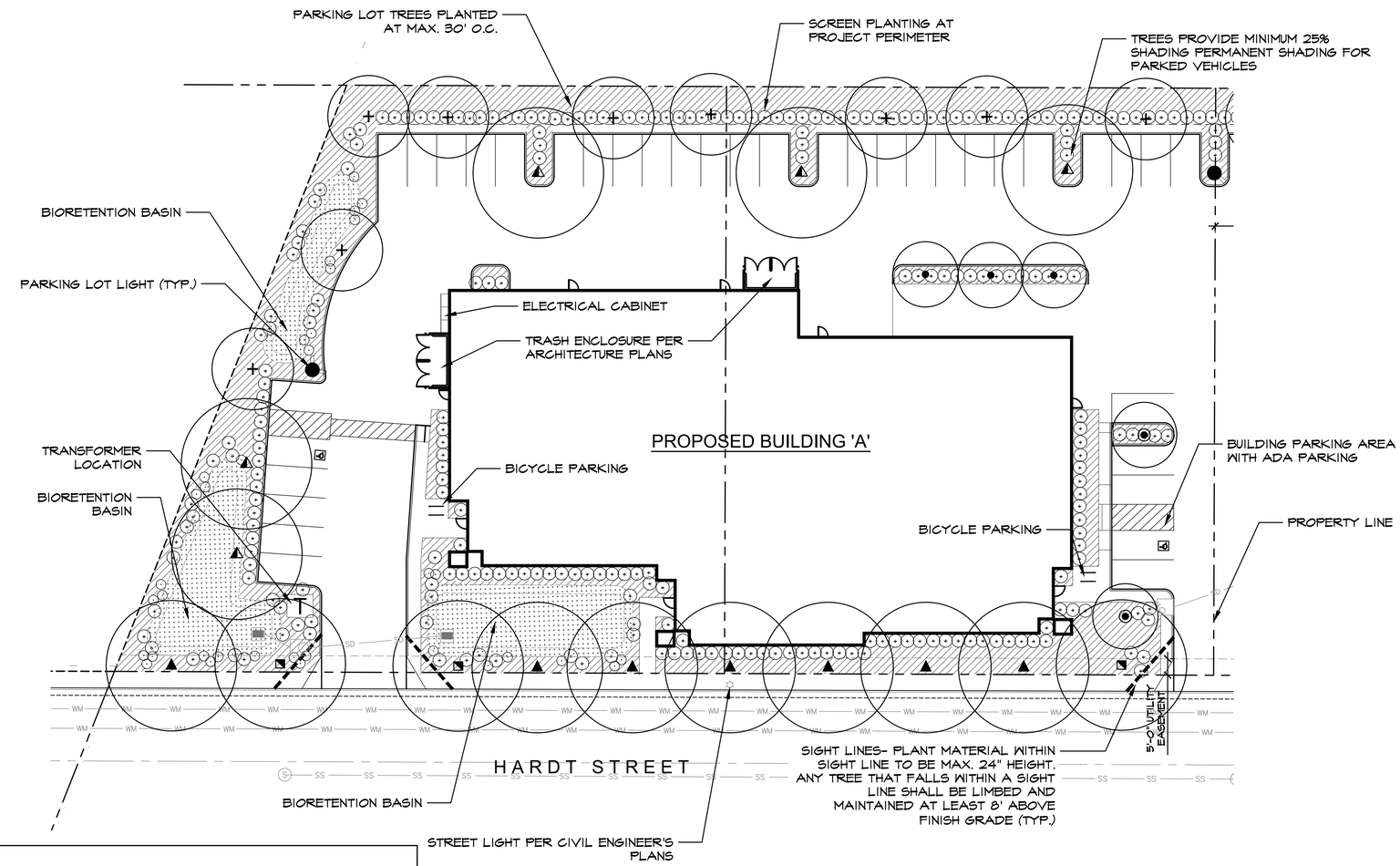
| Hydrozone # / Planting **(a)** Description | Plant Factor (PF) | Irrigation **(b)** Method | Irrigation Efficiency **(c)** (IE) | ETAF (PF/IE) | Landscape Area In Square Feet | ETAF x Area | Estimated Total Water Use **(d)** (ETWU) |
|---|---|---|---|---|---|---|---|
| **Regular Landscape Areas** | | | | | | | |
| Trees, Shrubs, GC | 0.2 | Drip-sub | 0.9 | 0.22 | 9,427 | 2,095 | 71,566 |
| Trees, Shrubs, GC | 0.5 | Drip-sub | 0.9 | 0.56 | 1,421 | 789 | 26,969 |
| Basin | 0.2 | Rotors | 0.75 | 0.27 | 3,358 | 895 | 30,591 |
| | | | | **Totals** | 14,206 | 3,780 | 129,126 |
| **Special Landscape Areas** | | | | | | | |
| | | | | | | 0 | 0 |
| | | | | **Totals** | 0 | 0 | 0 |
| Estimated Total Water Use in Gallons Per Year **(ETWU) Total** | | | | | | | **129,126** |
| Maximum Annual Water Allowance in Gallons Per Year **(MAWA) Total** | | | | | | | **203,828** |
| **MAWA - ETWU =** | | | | | | | **74,703** |
| **MAWA (Annual Gallons Allowed) =** | | | | | | | **must be a postitive number** |
| ***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]*** | | | | | | | |

****Average Irrigation Efficiency for overall irrigation system shall meet or exceed 0.75 (total of all efficiency ratings divided by number of hydrozones).**

### ETAF CALCULATIONS

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas and 0.45 or below for non-residential areas. ***Provide Totals based on information calculated in Worksheet above.***

| **Regular Landscape Areas** | | ***Totals*** | **All Landscape Areas** | | ***Totals*** |
|---|---|---|---|---|---|
| Total ETAF x Area | (B) = | 3,780 | Total ETAF x Area | (B+D) = | 3,780 |
| Total Area | (A) = | 14,206 | Total Area | (A+C) = | 14,206 |
| **Average ETAF** | **(B) ÷ (A) =** | 0.27 | **Site wide ETAF** | (B+D) ÷ (A+C) = | 0.27 |




NOTE: PLANT MATERIAL WITHIN SIGHT LINE TO BE MAX. 24" HEIGHT. ANY TREE THAT FALLS WITHIN A SIGHT LINE SHALL BE LIMBED AND MAINTAINED AT LEAST 8' ABOVE FINISH GRADE (TYP.)

PARKING SPACES: 36
24' BOX TREES PROPOSED: 17
RATIO: 1 TREE PER 2.12 SPACES

SEE SHEET 2 FOR PLANTING LEGEND AND NOTES

North

0 10' 20' 60'
Scale 1" = 20'

Underground Service Alert
Call: TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

rla 2681
HOWARD ASSOCIATES
landscape architecture
1951 Fourth avenue
Suite 302
san diego ca 92101 619 718 9660

| MARK | REVISIONS | BY | APPR. | DATE |
|---|---|---|---|---|

BENCH MARK:

APPROVED _____ 2007

SENIOR CIVIL ENGINEER _____
REGISTERED CIVIL ENGINEER NO. _____

DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

*CITY OF SAN BERNARDINO*
*DEVELOPMENT SERVICES–PUBLIC WORKS/ENGINEERING*

*Landscape Concept Plan for:*
*BUILDING 'A'*
*San Bernardino Business Park*
*HARDT ST TO E BRIER DR*

DRAWING NO.
*XXXX*

SHEET 1 OF 2 SHEETS

FOR CITY USE ONLY: FILE NO. W.O. NO.

# LEGAL DESCRIPTION

PARCELS 31 & 32 OF PARCEL MAP NO. 5464
FILED IN SAN BERNARDING COUNTY

APN: 0281-311-07 & 06

ADDRESS: HARDT STREET

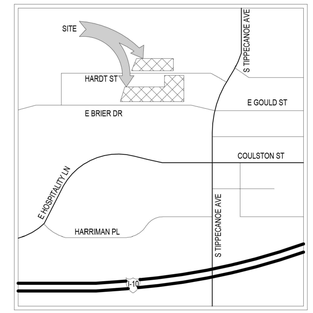
USE: SHELL

ZONE: TOD CR-3

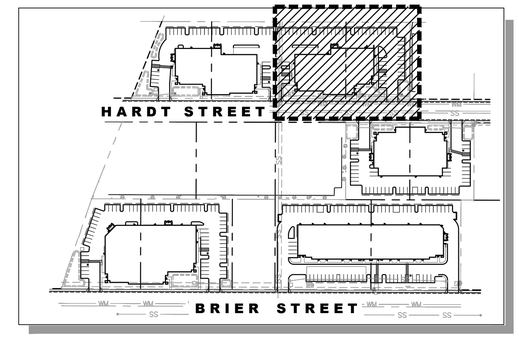
# SITE INFORMATION

| | | |
|---|---|---|
| SITE AREA: | 56,564 SF | 1.30 ACRES |
| PROPOSED BUILDING COVERAGE: | 17,147 SF | 30.31 % |
| PROPOSED LANDSCAPE AREA: | 13,704 SF | 24.23 % |
| PROPOSED PAVING AREA: | 25,713 SF | 45.46 % |
| TYPE OF DEVELOPMENT: | SHELL | |

VICINITY MAP




KEY MAP




North
NTS

| (a) Hydrozone Category | PF- Plant Factor |
|---|---|
| Very Low Water Use | 0.0 - 0.1 |
| Low Water Use* | 0.2 - 0.3 |
| Moderate Water Use | 0.4 - 0.6 |
| High Water Use | 0.7 - 1.0 |

*Artificial turf and temporarily irrigated areas are considered Low Water Use.

| (b) Irrigation Method | (c) IE- Irrigation Efficiency |
|---|---|
| Filler Pipe for Pools/Spas | 1.00 |
| Drip/Subsurface | 0.90 |
| Bubblers | 0.85 |
| Rotors | 0.75 |
| Rotators | 0.70 |
| Overhead Spray | 0.60 |

**(d)**
**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

**ETo** - see Appendix A in Water Efficient Lands **(ETO = 55.1)**
Design Manual.
**0.62** is the conversion factor to gallons per sq. ft.
**ETAF** is Plant Factor/Irrigation Efficiency.
**Area** is the Landscaped Area for each hydrozone.

**(e)**
**MAWA (Annual Gallons Allowed) =**
***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]***

**LA** is the total landscape of all hydrozone areas in sq. ft.
**SLA** is the total special landscape area in square feet.
**ETAF** is 0.42 for all areas

## WATER EFFICIENT LANDSCAPE WORKSHEET

**Building 'B'**

**REFERENCE EVAPOTRANSPIRATION (ETo)____ 55.1**

**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

| Hydrozone # / Planting **(a)** Description | Plant Factor (PF) | Irrigation **(b)** Method | Irrigation Efficiency **(c)** (IE) | ETAF (PF/IE) | Landscape Area In Square Feet | ETAF x Area | Estimated Total Water Use **(d)** (ETWU) |
|---|---|---|---|---|---|---|---|
| **Regular Landscape Areas** | | | | | | | |
| Trees, Shrubs, GC | 0.2 | Drip-sub | 0.9 | 0.22 | 10,425 | 2,317 | 79,142 |
| Trees, Shrubs, GC | 0.5 | Drip-sub | 0.9 | 0.56 | 1,371 | 762 | 26,020 |
| Basin | 0.2 | Rotors | 0.75 | 0.27 | 1,908 | 509 | 17,382 |
| | | | | **Totals** | 13,704 | 3,587 | 122,544 |
| **Special Landscape Areas** | | | | | | | |
| | | | | | | 0 | 0 |
| | | | | **Totals** | 0 | 0 | 0 |
| Estimated Total Water Use in Gallons Per Year **(ETWU) Total** | | | | | | | **122,544** |
| Maximum Annual Water Allowance in Gallons Per Year **(MAWA) Total** | | | | | | | **196,626** |
| | | | | | | **MAWA - ETWU =** | **74,082** |
| **MAWA (Annual Gallons Allowed) =** | | | | | | | **must be a postitive number** |
| ***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]*** | | | | | | | |

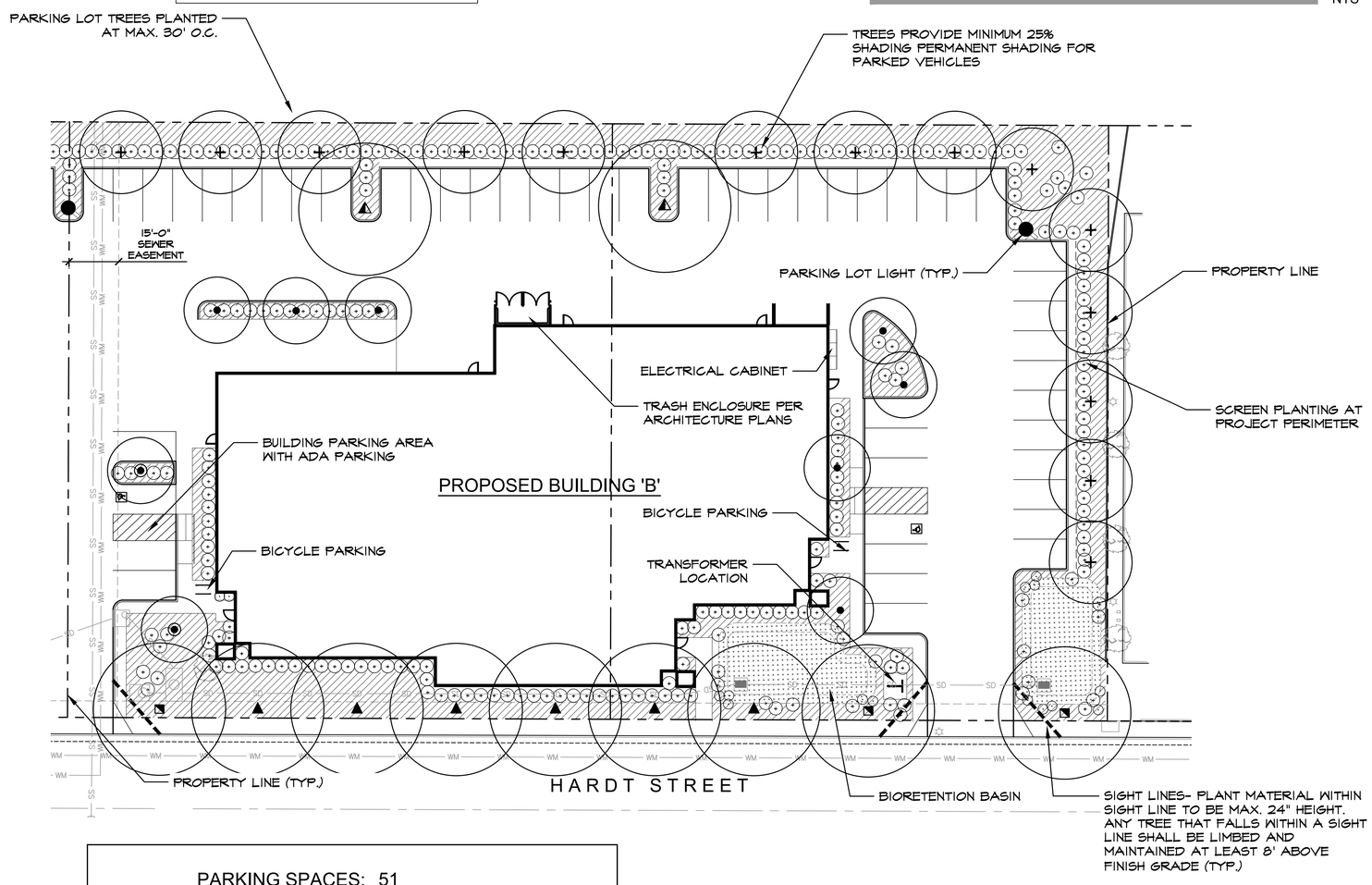
****Average Irrigation Efficiency for overall irrigation system shall meet or exceed 0.75 (total of all efficiency ratings divided by number of hydrozones).**

### ETAF CALCULATIONS

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas and 0.45 or below for non-residential areas. ***Provide Totals based on information calculated in Worksheet above.***

| **Regular Landscape Areas** | | ***Totals*** | **All Landscape Areas** | | ***Totals*** |
|---|---|---|---|---|---|
| Total ETAF x Area | (B) = | 3,587 | Total ETAF x Area | (B+D) = | 3,587 |
| Total Area | (A) = | 13,704 | Total Area | (A+C) = | 13,704 |
| **Average ETAF** | **(B) ÷ (A) =** | 0.26 | **Site wide ETAF** | (B+D) ÷ (A+C) = | 0.26 |

NOTE: PLANT MATERIAL WITHIN SIGHT LINE TO BE MAX. 24" HEIGHT. ANY TREE THAT FALLS WITHIN A SIGHT LINE SHALL BE LIMBED AND MAINTAINED AT LEAST 8' ABOVE FINISH GRADE (TYP.)




PARKING SPACES: 51
24' BOX TREES PROPOSED: 26
RATIO: 1 TREE PER 1.96 SPACES

SEE SHEET 2 FOR PLANTING LEGEND AND NOTES

North

0 10' 20' 60'
Scale 1" = 20'

Underground Service Alert
Call: TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

HOWARD ASSOCIATES
rla 2681
landscape architecture
1951 Fourth avenue
Suite 302
san diego ca 92101 619 718 9660

| MARK | REVISIONS | BY | APPR. | DATE |
|---|---|---|---|---|

BENCH MARK:

APPROVED _____ 2007
SENIOR CIVIL ENGINEER
REGISTERED CIVIL ENGINEER NO.
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

*CITY OF SAN BERNARDINO*
*DEVELOPMENT SERVICES–PUBLIC WORKS/ENGINEERING*

*Landscape Concept Plan for:*
*BUILDING 'B'*
*San Bernardino Business Park*
*HARDT ST TO E BRIER DR*

FOR CITY USE ONLY: FILE NO. W.O. NO.

DRAWING NO.
*XXXX*
SHEET *1* OF *2* SHEETS

## LEGAL DESCRIPTION

PARCELS 24 & 25 OF PARCEL MAP NO. 5464
FILED IN SAN BERNARDING COUNTY

APN: 0281-311-11 & 12

ADDRESS: HARDT STREET

USE: SHELL

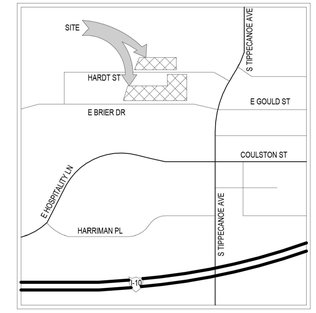
ZONE: TOD CR-3

## SITE INFORMATION

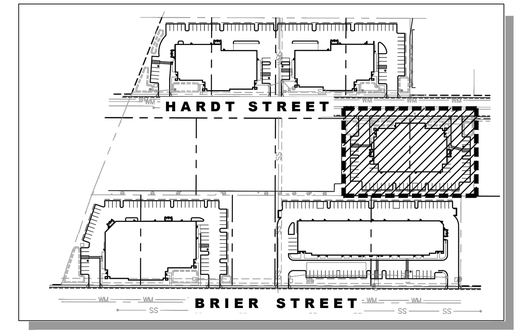
| | | |
|---|---|---|
| SITE AREA: | 54,041 SF | 1.24 ACRES |
| PROPOSED BUILDING COVERAGE: | 17,813 SF | 32.96 % |
| PROPOSED LANDSCAPE AREA: | 13,939 SF | 25.79 % |
| PROPOSED PAVING AREA: | 22,289 SF | 41.24 % |

TYPE OF DEVELOPMENT: SHELL

VICINITY MAP




KEY MAP




North
NTS

| (a) Hydrozone Category | PF- Plant Factor |
|---|---|
| Very Low Water Use | 0.0 - 0.1 |
| Low Water Use* | 0.2 - 0.3 |
| Moderate Water Use | 0.4 - 0.6 |
| High Water Use | 0.7 - 1.0 |

*Artificial turf and temporarily irrigated areas are considered Low Water Use.

| (b) Irrigation Method | (c) IE- Irrigation Efficiency |
|---|---|
| Filler Pipe for Pools/Spas | 1.00 |
| Drip/Subsurface | 0.90 |
| Bubblers | 0.85 |
| Rotors | 0.75 |
| Rotators | 0.70 |
| Overhead Spray | 0.60 |

**(d)**
**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

**ETo** - see Appendix A in Water Efficient Lands **(ETO = 55.1)**
Design Manual.
**0.62** is the conversion factor to gallons per sq. ft.
**ETAF** is Plant Factor/Irrigation Efficiency.
**Area** is the Landscaped Area for each hydrozone.

**(e)**
**MAWA (Annual Gallons Allowed) =**
***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]***

**LA** is the total landscape of all hydrozone areas in sq. ft.
**SLA** is the total special landscape area in square feet.
**ETAF** is 0.42 for all areas

### WATER EFFICIENT LANDSCAPE WORKSHEET

**Building 'C'**

**REFERENCE EVAPOTRANSPIRATION (ETo)____ 55.1**

**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

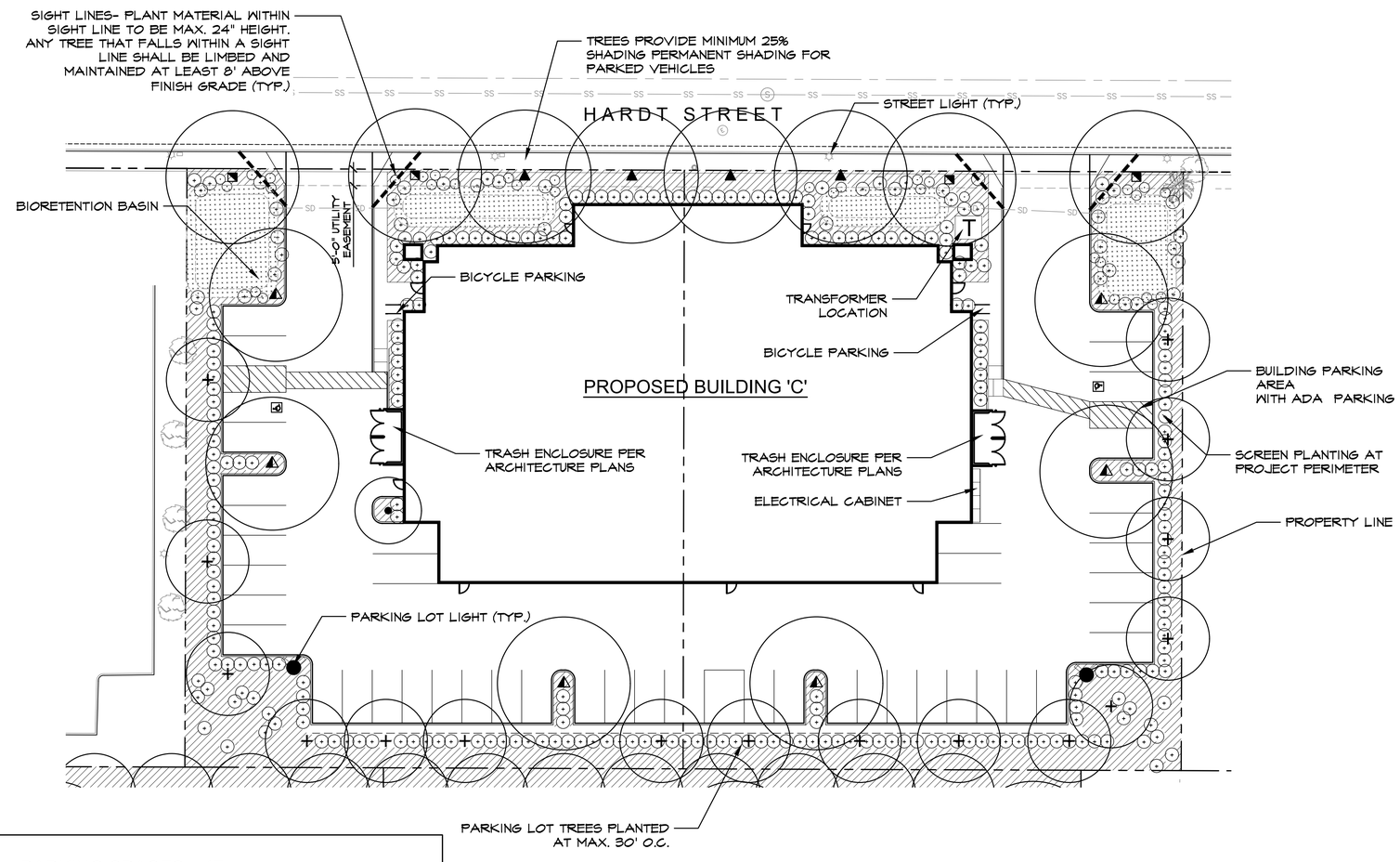
| Hydrozone # / Planting **(a)** Description | Plant Factor (PF) | Irrigation **(b)** Method | Irrigation Efficiency **(c)** (IE) | ETAF (PF/IE) | Landscape Area In Square Feet | ETAF x Area | Estimated Total Water Use **(d)** (ETWU) |
|---|---|---|---|---|---|---|---|
| **Regular Landscape Areas** | | | | | | | |
| Trees, Shrubs, GC | 0.2 | Drip-sub | 0.9 | 0.22 | 9,898 | 2,200 | 75,141 |
| Trees, Shrubs, GC | 0.5 | Drip-sub | 0.9 | 0.56 | 1,395 | 775 | 26,476 |
| Basin | 0.2 | Rotors | 0.75 | 0.27 | 2,646 | 706 | 24,105 |
| | | | | **Totals** | 13,939 | 3,680 | 125,721 |
| **Special Landscape Areas** | | | | | | | |
| | | | | | | 0 | 0 |
| | | | | **Totals** | 0 | 0 | 0 |
| Estimated Total Water Use in Gallons Per Year **(ETWU) Total** | | | | | | | **125,721** |
| Maximum Annual Water Allowance in Gallons Per Year **(MAWA) Total** | | | | | | | **199,997** |
| **MAWA - ETWU =** | | | | | | | **74,276** |
| **MAWA (Annual Gallons Allowed) =** | | | | | | | must be a postitive number |
| ***(ETo)(0.62)[(ETAF x LA) + (1- ETAF) x SLA)]*** | | | | | | | |

****Average Irrigation Efficiency for overall irrigation system shall meet or exceed 0.75 (total of all efficiency ratings divided by number of hydrozones).**

### ETAF CALCULATIONS

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas and 0.45 or below for non-residential areas. ***Provide Totals based on information calculated in Worksheet above.***

| **Regular Landscape Areas** | | ***Totals*** | **All Landscape Areas** | | ***Totals*** |
|---|---|---|---|---|---|
| Total ETAF x Area | (B) = | 3,680 | Total ETAF x Area | (B+D) = | 3,680 |
| Total Area | (A) = | 13,939 | Total Area | (A+C) = | 13,939 |
| **Average ETAF** | **(B) ÷ (A) =** | 0.26 | **Site wide ETAF** | (B+D) ÷ (A+C) = | 0.26 |




NOTE: PLANT MATERIAL WITHIN SIGHT LINE TO BE MAX. 24" HEIGHT. ANY TREE THAT FALLS WITHIN A SIGHT LINE SHALL BE LIMBED AND MAINTAINED AT LEAST 8' ABOVE FINISH GRADE (TYP.)

PARKING SPACES: 47
24' BOX TREES PROPOSED: 22
RATIO: 1 TREE PER 2.13 SPACES

SEE SHEET 2 FOR PLANTING LEGEND AND NOTES

North
0 10' 20' 60'
Scale 1" = 20'

Underground Service Alert
Call: TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

rla 2681
HOWARD ASSOCIATES
landscape architecture
1951 Fourth avenue
Suite 302
san diego ca 92101 619 718 9660

| MARK | REVISIONS | BY | APPR. | DATE |
|---|---|---|---|---|

BENCH MARK:

APPROVED _____ 2007
SENIOR CIVIL ENGINEER _____
REGISTERED CIVIL ENGINEER NO. _____
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES–PUBLIC WORKS/ENGINEERING

Landscape Concept Plan for:
BUILDING 'C'
San Bernardino Business Park
HARDT ST TO E BRIER DR

DRAWING NO. XXXX
SHEET 1 OF 2 SHEETS

FOR CITY USE ONLY: FILE NO. W.O. NO.

PARKING SPACES: 69
24' BOX TREES PROPOSED: 37
RATIO: 1 TREE PER 1.86 SPACES

## LEGAL DESCRIPTION

PARCELS 18 & 19 OF PARCEL MAP NO. 5464
FILED IN SAN BERNARDING COUNTY

APN: 281-311-18 & 19

ADDRESS: HARDT STREET

USE: SHELL

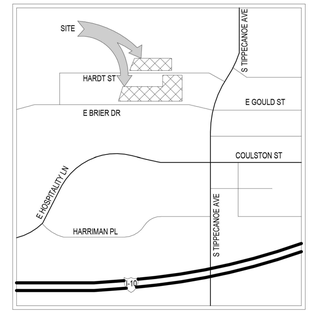
ZONE: TOD CR-3

## SITE INFORMATION

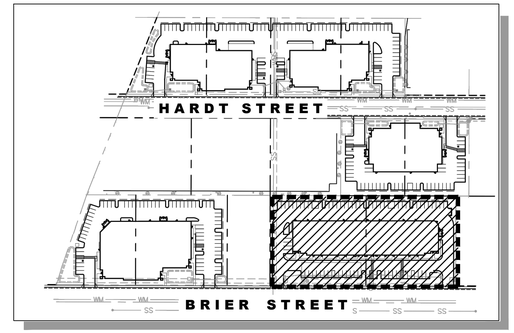
| | | |
|---|---|---|
| SITE AREA: | 91,559 SF | 2.10 ACRES |
| PROPOSED BUILDING COVERAGE: | 27,008 SF | 29.5 % |
| PROPOSED LANDSCAPE AREA: | 18,904 SF | 20.65 % |
| PROPOSED PAVING AREA: | 45,647 SF | 49.86 % |

TYPE OF DEVELOPMENT: SHELL

VICINITY MAP




KEY MAP




North
NTS

| (a) Hydrozone Category | PF- Plant Factor |
|---|---|
| Very Low Water Use | 0.0 - 0.1 |
| Low Water Use* | 0.2 - 0.3 |
| Moderate Water Use | 0.4 - 0.6 |
| High Water Use | 0.7 - 1.0 |

*Artificial turf and temporarily irrigated areas are considered Low Water Use.

| (b) Irrigation Method | (c) IE- Irrigation Efficiency |
|---|---|
| Filler Pipe for Pools/Spas | 1.00 |
| Drip/Subsurface | 0.90 |
| Bubblers | 0.85 |
| Rotors | 0.75 |
| Rotators | 0.70 |
| Overhead Spray | 0.60 |

**(d)**
**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

**ETo** - see Appendix A in Water Efficient Land Design Manual. **(ETO = 55.1)**
**0.62** is the conversion factor to gallons per sq. ft.
**ETAF** is Plant Factor/Irrigation Efficiency.
**Area** is the Landscaped Area for each hydrozone.

**(e)**
**MAWA (Annual Gallons Allowed) =**
***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]***

**LA** is the total landscape of all hydrozone areas in sq. ft.
**SLA** is the total special landscape area in square feet.
**ETAF** is 0.42 for all areas

### WATER EFFICIENT LANDSCAPE WORKSHEET

**Building 'D'**

**REFERENCE EVAPOTRANSPIRATION (ETo)____ 55.1**

**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

| Hydrozone # / Planting **(a)** Description | Plant Factor (PF) | Irrigation **(b)** Method | Irrigation Efficiency **(c)** (IE) | ETAF (PF/IE) | Landscape Area In Square Feet | ETAF x Area | Estimated Total Water Use **(d)** (ETWU) |
|---|---|---|---|---|---|---|---|
| **Regular Landscape Areas** | | | | | | | |
| Trees, Shrubs, GC | 0.2 | Drip-sub | 0.9 | 0.22 | 17,013 | 3,781 | 129,155 |
| Trees, Shrubs, GC | 0.5 | Drip-sub | 0.9 | 0.56 | 1,891 | 1,051 | 35,889 |
| | | | | | | | |
| | | | | **Totals** | 18,904 | 4,831 | 165,044 |
| **Special Landscape Areas** | | | | | | | |
| | | | | | | 0 | 0 |
| | | | | **Totals** | 0 | 0 | 0 |
| Estimated Total Water Use in Gallons Per Year **(ETWU) Total** | | | | | | | **165,044** |
| Maximum Annual Water Allowance in Gallons Per Year **(MAWA) Total** | | | | | | | **271,235** |
| | | | | | | **MAWA - ETWU =** | **106,191** |
| **MAWA (Annual Gallons Allowed) =** | | | | | | | must be a postitive number |
| ***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]*** | | | | | | | |

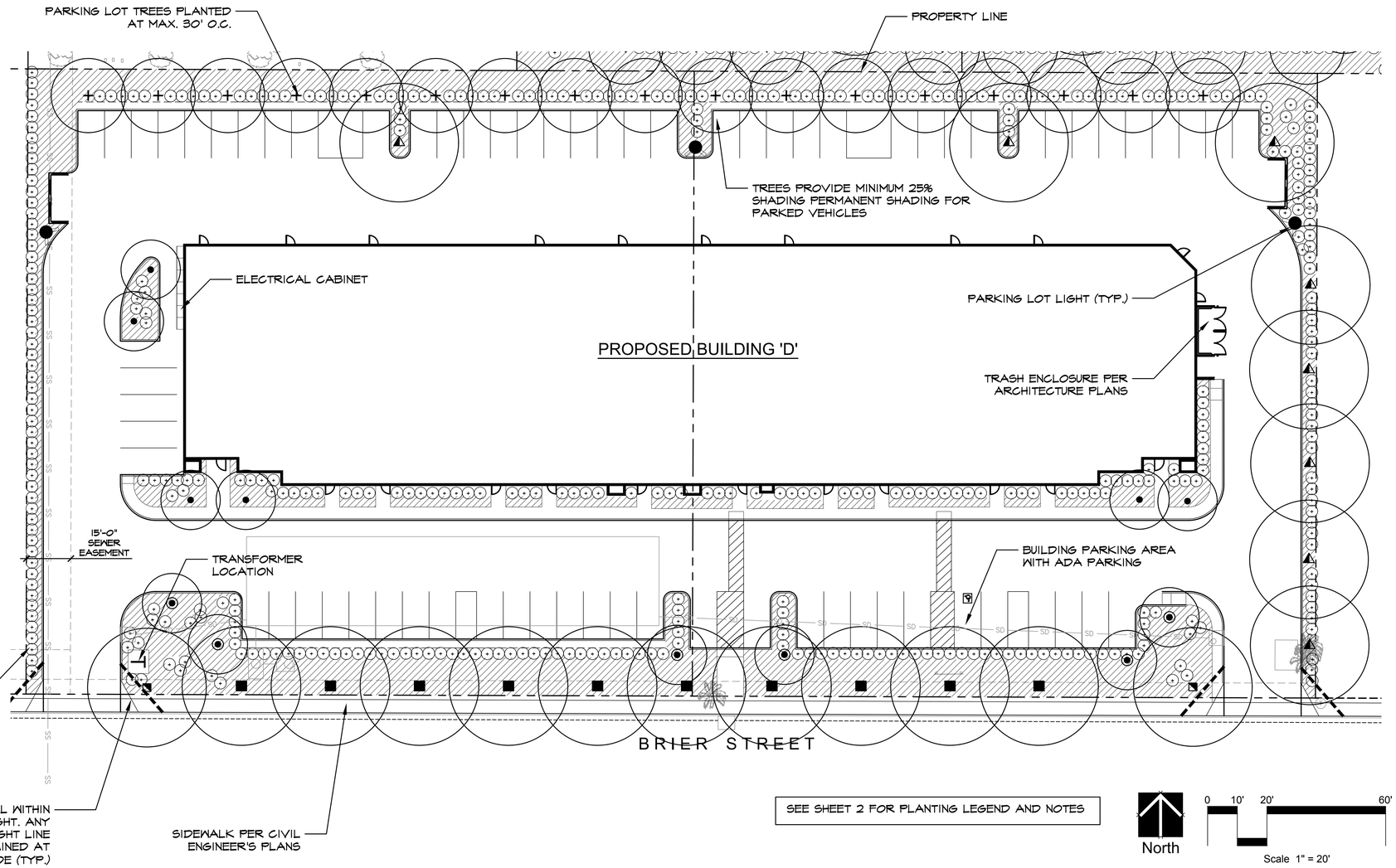
****Average Irrigation Efficiency for overall irrigation system shall meet or exceed 0.75 (total of all efficiency ratings divided by number of hydrozones).**

### ETAF CALCULATIONS

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas and 0.45 or below for non-residential areas. ***Provide Totals based on information calculated in Worksheet above.***

| **Regular Landscape Areas** | | ***Totals*** | **All Landscape Areas** | | ***Totals*** |
|---|---|---|---|---|---|
| Total ETAF x Area | (B) = | 4,831 | Total ETAF x Area | (B+D) = | 4,831 |
| Total Area | (A) = | 18,904 | Total Area | (A+C) = | 18,904 |
| **Average ETAF** | **(B) ÷ (A) =** | 0.26 | **Site wide ETAF** | (B+D) ÷ (A+C) = | 0.26 |

NOTE: PLANT MATERIAL WITHIN SIGHT LINE TO BE MAX. 24" HEIGHT. ANY TREE THAT FALLS WITHIN A SIGHT LINE SHALL BE LIMBED AND MAINTAINED AT LEAST 8' ABOVE FINISH GRADE (TYP.)




SEE SHEET 2 FOR PLANTING LEGEND AND NOTES

North

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|---|---|---|---|---|

BENCH MARK:

APPROVED _____ 2007

SENIOR CIVIL ENGINEER _____
REGISTERED CIVIL ENGINEER NO. _____
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

CITY OF SAN BERNARDINO
DEVELOPMENT SERVICES–PUBLIC WORKS/ENGINEERING

Landscape Concept Plan for:
BUILDING 'D'
San Bernardino Business Park
HARDT ST TO E BRIER DR

DRAWING NO. XXXX

SHEET 1 OF 2 SHEETS

FOR CITY USE ONLY: FILE NO. W.O. NO.

PARKING SPACES: 71
24' BOX TREES PROPOSED: 37
RATIO: 1 TREE PER 1.92 SPACES

| (a) Hydrozone Category | PF- Plant Factor |
|---|---|
| Very Low Water Use | 0.0 - 0.1 |
| Low Water Use* | 0.2 - 0.3 |
| Moderate Water Use | 0.4 - 0.6 |
| High Water Use | 0.7 - 1.0 |

*Artificial turf and temporarily irrigated areas are considered Low Water Use.

| (b) Irrigation Method | (c) IE- Irrigation Efficiency |
|---|---|
| Filler Pipe for Pools/Spas | 1.00 |
| Drip/Subsurface | 0.90 |
| Bubblers | 0.85 |
| Rotors | 0.75 |
| Rotators | 0.70 |
| Overhead Spray | 0.60 |

**(d)**
**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

**ETo** - see Appendix A in Water Efficient Land: Design Manual. **(ETO = 55.1)**
**0.62** is the conversion factor to gallons per sq. ft.
**ETAF** is Plant Factor/Irrigation Efficiency.
**Area** is the Landscaped Area for each hydrozone.

**(e)**
**MAWA (Annual Gallons Allowed) =**
***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]***

**LA** is the total landscape of all hydrozone areas in sq. ft.
**SLA** is the total special landscape area in square feet.
**ETAF** is 0.42 for all areas

**WATER EFFICIENT LANDSCAPE WORKSHEET** **Building 'E'**

**REFERENCE EVAPOTRANSPIRATION (ETo)____ 55.1**

**ETWU (Annual Gallons Required) =**
***Eto x 0.62 x ETAF x Area***

| Hydrozone # / Planting **(a)** Description | Plant Factor (PF) | Irrigation **(b)** Method | Irrigation Efficiency **(c)** (IE) | ETAF (PF/IE) | Landscape Area In Square Feet | ETAF x Area | Estimated Total Water Use **(d)** (ETWU) |
|---|---|---|---|---|---|---|---|
| **Regular Landscape Areas** | | | | | | | |
| Trees, Shrubs, GC | 0.2 | Drip-sub | 0.9 | 0.22 | 13,401 | 2,978 | 101,734 |
| Trees, Shrubs, GC | 0.5 | Drip-sub | 0.9 | 0.56 | 1,984 | 1,102 | 37,654 |
| Basin | 0.2 | rotors | 0.75 | 0.27 | 4,438 | | |
| | | | | **Totals** | 19,823 | 4,080 | 139,389 |
| **Special Landscape Areas** | | | | | | | |
| | | | | | | 0 | 0 |
| | | | | **Totals** | 0 | 0 | 0 |
| Estimated Total Water Use in Gallons Per Year **(ETWU) Total** | | | | | | | **139,389** |
| Maximum Annual Water Allowance in Gallons Per Year **(MAWA) Total** | | | | | | | **284,421** |
| | | | | | | **MAWA - ETWU =** | **145,033** |
| **MAWA (Annual Gallons Allowed) =** | | | | | | **must be a positive number** | |
| ***(ETo)(0.62)[(ETAF x LA) + ((1- ETAF) x SLA)]*** | | | | | | | |

****Average Irrigation Efficiency for overall irrigation system shall meet or exceed 0.75 (total of all efficiency ratings divided by number of hydrozones).**

**ETAF CALCULATIONS**

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas and 0.45 or below for non-residential areas. ***Provide Totals based on information calculated in Worksheet above.***

| **Regular Landscape Areas** | | ***Totals*** | **All Landscape Areas** | | ***Totals*** |
|---|---|---|---|---|---|
| Total ETAF x Area | (B) = | 4,080 | Total ETAF x Area | (B+D) = | 4,080 |
| Total Area | (A) = | 19,823 | Total Area | (A+C) = | 19,823 |
| **Average ETAF** | **(B) ÷ (A) =** | 0.21 | **Site wide ETAF** | (B+D) ÷ (A+C) = | 0.21 |

NOTE: PLANT MATERIAL WITHIN SIGHT LINE TO BE MAX. 24" HEIGHT. ANY TREE THAT FALLS WITHIN A SIGHT LINE SHALL BE LIMBED AND MAINTAINED AT LEAST 8' ABOVE FINISH GRADE (TYP.)

# LEGAL DESCRIPTION

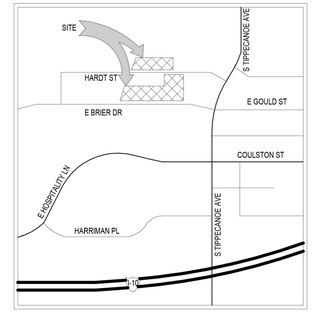
PARCELS 1 & 2 OF PARCEL MAP NO. 5464
FILED IN SAN BERNARDING COUNTY

APN: 0281-301- 20 & 21
ADDRESS: BRIER STREET
USE: SHELL
ZONE: TOD CR-3

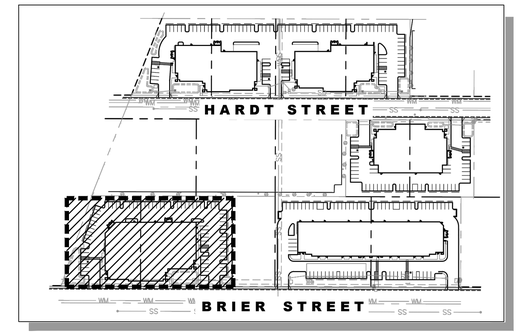
# SITE INFORMATION

| | | |
|---|---|---|
| SITE AREA: | 76,935 SF | 1.77 ACRES |
| PROPOSED BUILDING COVERAGE: | 26,562 SF | 34.53 % |
| PROPOSED LANDSCAPE AREA: | 19,823 SF | 25.77 % |
| PROPOSED PAVING AREA: | 30,550 SF | 39.71 % |
| TYPE OF DEVELOPMENT: | SHELL | |

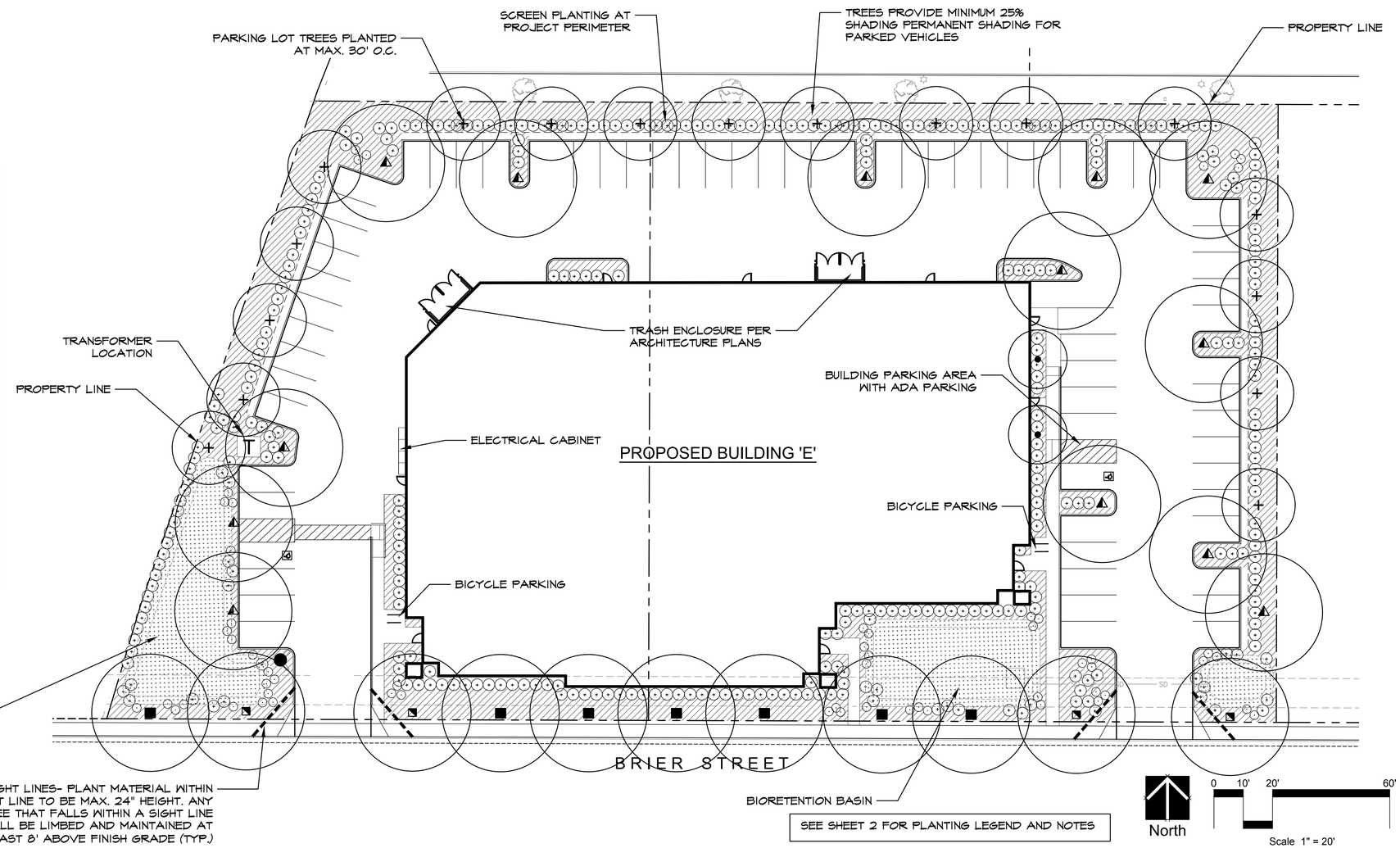
VICINITY MAP




KEY MAP




North
NTS

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| MARK | REVISIONS | BY | APPR. | DATE |
|---|---|---|---|---|

BENCH MARK:

APPROVED _____ 2007
SENIOR CIVIL ENGINEER _____
REGISTERED CIVIL ENGINEER NO. _____
DRAWN BY:
CHECKED BY:
RECOMMENDED BY:

*CITY OF SAN BERNARDINO*
*DEVELOPMENT SERVICES~PUBLIC WORKS/ENGINEERING*

*Landscape Concept Plan for:*
*BUILDING 'E'*
*San Bernardino Business Park*
*HARDT ST TO E BRIER DR*

FOR CITY USE ONLY: FILE NO. W.O. NO.

DRAWING NO.
XXXX
SHEET 1 OF 2 SHEETS

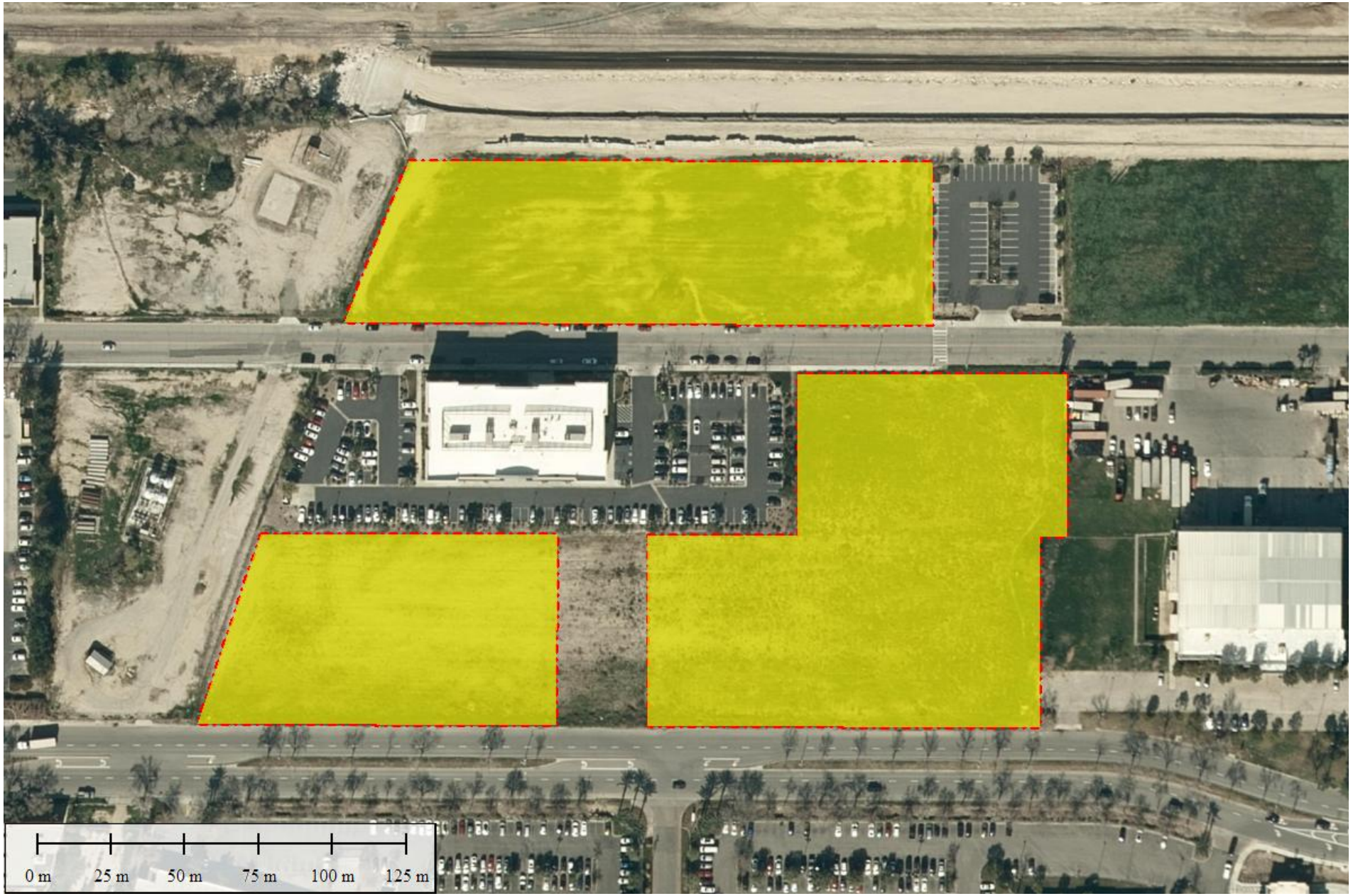



**Figure 4**
Habitat Map
Hardt & Brier
San Bernardino County, California

**Legend**

Project Site Boundary

Ruderal Habitat
(7.67 Acres)

N

Hernandez
Environmental
Services

**Figure 5**
Impact Map
Hardt & Brier
San Bernardino County, California

**Legend**

Project Site Boundary

Impacts to Ruderal Habitat
(7.67 Acres)

N

Hernandez
Environmental
Services

# APPENDIX A

# Observed Species List

## Plant List

| Scientific Name | Common Name |
|---|---|
| *Atriplex lantiformis* | Big saltbush |
| *Tamarix* sp. | Tamarisk |

## Wildlife List

| Scientific Name | Common Name |
|---|---|
| *Columba livia* | Rock pigeon |
| *Melospiza melodia* | Song sparrow |

# APPENDIX B

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Allium howellii var. clokeyi | Mt. Pinos onion | Monocots | None | None | 1B.3 | Great Basin scrub \| Meadow & seep \| Pinon & juniper woodlands | Great Basin scrub, pinyon and juniper woodland, meadows and seeps (edges). | 1385-1800 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Ambrosia monogyra | singlewhorl burrobrush | Dicots | None | None | 2B.2 | Chaparral \| Sonoran desert scrub | Chaparral, Sonoran desert scrub. | Sandy soils. 5-475 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Ambrosia pumila | San Diego ambrosia | Dicots | Endangered | None | 1B.1 | Chaparral \| Coastal scrub \| Valley & foothill grassland | Chaparral, coastal scrub, valley and foothill grassland. | Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Arenaria paludicola | marsh sandwort | Dicots | Endangered | Endangered | 1B.1 | Freshwater marsh \| Marsh & swamp \| Wetland | Marshes and swamps. | Growing up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh. Sandy soil. 3-170 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Astragalus hornii var. hornii | Horn's milk-vetch | Dicots | None | None | 1B.1 | Alkali playa \| Meadow & seep \| Wetland | Meadows and seeps, playas. | Lake margins, alkaline sites. 75-350 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Berberis nevinii | Nevin's barberry | Dicots | Endangered | Endangered | 1B.1 | Chaparral \| Cismontane woodland \| Coastal scrub \| Riparian scrub | Chaparral, cismontane woodland, coastal scrub, riparian scrub. | On steep, N-facing slopes or in low grade sandy washes. 90-1590 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Brodiaea filifolia | thread-leaved brodiaea | Monocots | Threatened | Endangered | 1B.1 | Chaparral \| Cismontane woodland \| Coastal scrub \| Valley & foothill grassland \| Vernal pool \| Wetland | Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. | Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Calochortus palmeri var. palmeri | Palmer's mariposa-lily | Monocots | None | None | 1B.2 | Chaparral \| Lower montane coniferous forest \| Meadow & seep | Meadows and seeps, chaparral, lower montane coniferous forest. | Vernally moist places in yellow-pine forest, chaparral. 195-2530 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Calochortus plummerae | Plummer's mariposa-lily | Monocots | None | None | 4.2 | Chaparral \| Cismontane woodland \| Coastal scrub \| Lower montane coniferous forest \| Valley & foothill grassland | Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. | Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Carex comosa | bristly sedge | Monocots | None | None | 2B.1 | Coastal prairie \| Freshwater marsh \| Marsh & swamp \| Valley & foothill grassland \| Wetland | Marshes and swamps, coastal prairie, valley and foothill grassland. | Lake margins, wet places; site below sea level is on a Delta island. -5-1010 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Castilleja lasiorhyncha | San Bernardino Mountains owl's-clover | Dicots | None | None | 1B.2 | Chaparral \| Meadow & seep \| Pavement plain \| Riparian woodland \| Upper montane coniferous forest \| Wetland | Meadows and seeps, pebble plain, upper montane coniferous forest, chaparral, riparian woodland. | Mesic to drying soils in open areas of stream and meadow margins or in vernally wet areas. 1140-2320 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Centromadia pungens ssp. laevis | smooth tarplant | Dicots | None | None | 1B.1 | Alkali playa \| Chenopod scrub \| Meadow & seep \| Riparian woodland \| Valley & foothill grassland \| Wetland | Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. | Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. | Suitable habitat is present on the project site. CNDDB found historic data of species on site. **This species is present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Chloropyron maritimum ssp. maritimum | salt marsh bird's-beak | Dicots | Endangered | Endangered | 1B.2 | Coastal dunes \| Marsh & swamp \| Salt marsh \| Wetland | Marshes and swamps, coastal dunes. | Limited to the higher zones of salt marsh habitat. 0-10 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Chorizanthe parryi var. parryi | Parry's spineflower | Dicots | None | None | 1B.1 | Chaparral \| Cismontane woodland \| Coastal scrub \| Valley & foothill grassland | Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. | Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Chorizanthe xanti var. leucotheca | white-bracted spineflower | Dicots | None | None | 1B.2 | Coastal scrub \| Mojavean desert scrub \| Pinon & juniper woodlands | Mojavean desert scrub, pinyon and juniper woodland, coastal scrub (alluvial fans). | Sandy or gravelly places. 365-1830 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Cuscuta obtusiflora var. glandulosa | Peruvian dodder | Dicots | None | None | 2B.2 | Marsh & swamp \| Wetland | Marshes and swamps (freshwater). | Freshwater marsh. 15-280 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Dodecahema leptoceras | slender-horned spineflower | Dicots | Endangered | Endangered | 1B.1 | Chaparral \| Cismontane woodland \| Coastal scrub | Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). | Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Eriastrum densifolium ssp. sanctorum | Santa Ana River woollystar | Dicots | Endangered | Endangered | 1B.1 | Chaparral \| Coastal scrub | Coastal scrub, chaparral. | In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Fimbristylis thermalis | hot springs fimbristylis | Monocots | None | None | 2B.2 | Meadow & seep \| Wetland | Meadows and seeps (alkaline). | Near hot springs. 115-1585 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Galium californicum ssp. primum | Alvin Meadow bedstraw | Dicots | None | None | 1B.2 | Chaparral \| Lower montane coniferous forest | Chaparral, lower montane coniferous forest. | Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. 1460-1830 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Helianthus nuttallii ssp. parishii | Los Angeles sunflower | Dicots | None | None | 1A | Freshwater marsh \| Marsh & swamp \| Salt marsh \| Wetland | Marshes and swamps (coastal salt and freshwater). | 35-1525 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Heuchera parishii | Parish's alumroot | Dicots | None | None | 1B.3 | Alpine boulder & rock field \| Limestone \| Lower montane coniferous forest \| Subalpine coniferous forest \| Upper montane coniferous forest | Lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, alpine boulder and rock field. | Rocky places. Sometimes on carbonate. 1340-3505 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Horkelia cuneata var. puberula | mesa horkelia | Dicots | None | None | 1B.1 | Chaparral \| Cismontane woodland \| Coastal scrub | Chaparral, cismontane woodland, coastal scrub. | Sandy or gravelly sites. 15-1645 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Imperata brevifolia | California satintail | Monocots | None | None | 2B.1 | Chaparral \| Coastal scrub \| Meadow & seep \| Mojavean desert scrub \| Riparian scrub \| Wetland | Coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows and seeps (alkali), riparian scrub. | Mesic sites, alkali seeps, riparian areas. 3-1495 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Ivesia argyrocoma var. argyrocoma | silver-haired ivesia | Dicots | None | None | 1B.2 | Meadow & seep \| Pavement plain \| Upper montane coniferous forest | Meadows and seeps, pebble plains, upper montane coniferous forest. | In pebble plains and meadows with other rare plants. 1490-2960 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Lasthenia glabrata ssp. coulteri | Coulter's goldfields | Dicots | None | None | 1B.1 | Alkali playa \| Marsh & swamp \| Salt marsh \| Vernal pool \| Wetland | Coastal salt marshes, playas, vernal pools. | Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Lepidium virginicum var. robinsonii | Robinson's pepper-grass | Dicots | None | None | 4.3 | Chaparral \| Coastal scrub | Chaparral, coastal scrub. | Dry soils, shrubland. 4-1435 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Lilium parryi | lemon lily | Monocots | None | None | 1B.2 | Lower montane coniferous forest \| Meadow & seep \| Riparian forest \| Upper montane coniferous forest \| Wetland | Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. | Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows and seeps. 625-2930 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Lycium parishii | Parish's desert-thorn | Dicots | None | None | 2B.3 | Coastal scrub \| Sonoran desert scrub | Coastal scrub, Sonoran desert scrub. | -3-570 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Malacothamnus parishii | Parish's bush-mallow | Dicots | None | None | 1A | Chaparral \| Coastal scrub | Chaparral, coastal sage scrub. | In a wash. 305-455 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Monardella macrantha ssp. hallii | Hall's monardella | Dicots | None | None | 1B.3 | Broadleaved upland forest \| Chaparral \| Cismontane woodland \| Lower montane coniferous forest \| Valley & foothill grassland | Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. | Dry slopes and ridges in openings. 700-1800 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Monardella pringlei | Pringle's monardella | Dicots | None | None | 1A | Coastal scrub | Coastal scrub. | Sandy hills. 300-400 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Nasturtium gambelii | Gambel's water cress | Dicots | Endangered | Threatened | 1B.1 | Brackish marsh \| Freshwater marsh \| Marsh & swamp \| Wetland | Marshes and swamps. | Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-305 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Neolarra alba | white cuckoo bee | Insects | None | None | | | Known only from localities in Southern California. | Cleptoparasitic in the nests of perdita bees. | No habitat for this species is present on the project site. **This species is not present.** |
| Opuntia basilaris var. brachyclada | short-joint beavertail | Dicots | None | None | 1B.2 | Chaparral \| Joshua tree woodland \| Mojavean desert scrub \| Pinon & juniper woodlands | Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. | Sandy soil or coarse, granitic loam. 425-2015 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Perideridia parishii ssp. parishii | Parish's yampah | Dicots | None | None | 2B.2 | Lower montane coniferous forest \| Meadow & seep \| Upper montane coniferous forest | Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest. | Damp meadows or along streambeds-prefers an open pine canopy. 1470-2530 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Phacelia stellaris | Brand's star phacelia | Dicots | None | None | 1B.1 | Coastal dunes \| Coastal scrub | Coastal scrub, coastal dunes. | Open areas. 3-370 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Ribes divaricatum var. parishii | Parish's gooseberry | Dicots | None | None | 1A | Riparian woodland | Riparian woodland. | Salix swales in riparian habitats. 65-300 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Riversidian Alluvial Fan Sage Scrub | Riversidian Alluvial Fan Sage Scrub | Scrub | None | None | | Coastal scrub | | | Not present. |
| Schoenus nigricans | black bog-rush | Monocots | None | None | 2B.2 | Marsh & swamp \| Wetland | Marshes and swamps. | Often in alkaline marshes. 120-1525 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Senecio aphanactis | chaparral ragwort | Dicots | None | None | 2B.2 | Chaparral \| Cismontane woodland \| Coastal scrub | Chaparral, cismontane woodland, coastal scrub. | Drying alkaline flats. 20-1020 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Sidalcea malviflora ssp. dolosa | Bear Valley checkerbloom | Dicots | None | None | 1B.2 | Lower montane coniferous forest \| Meadow & seep \| Riparian woodland \| Upper montane coniferous forest \| Wetland | Meadows and seeps, riparian woodland, lower montane coniferous forest, upper montane coniferous forest. | Known from wet areas within forested habitats. Affected by hydrological changes. 1575-2590 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Sidalcea neomexicana | salt spring checkerbloom | Dicots | None | None | 2B.2 | Alkali playa \| Chaparral \| Coastal scrub \| Lower montane coniferous forest \| Mojavean desert scrub \| Wetland | Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. | Alkali springs and marshes. 3-2380 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Southern California Arroyo Chub/Santa Ana Sucker Stream | Southern California Arroyo Chub/Santa Ana Sucker Stream | Inland Waters | None | None | | | | | Not present. |
| Southern Coast Live Oak Riparian Forest | Southern Coast Live Oak Riparian Forest | Riparian | None | None | | Riparian forest | | | Not present. |
| Southern Cottonwood Willow Riparian Forest | Southern Cottonwood Willow Riparian Forest | Riparian | None | None | | Riparian forest | | | Not present. |
| Southern Mixed Riparian Forest | Southern Mixed Riparian Forest | Riparian | None | None | | Riparian forest | | | Not present. |
| Southern Riparian Forest | Southern Riparian Forest | Riparian | None | None | | Riparian forest | | | Not present. |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Southern Riparian Scrub | Southern Riparian Scrub | Riparian | None | None | | Riparian scrub | | | Not present. |
| Southern Sycamore Alder Riparian Woodland | Southern Sycamore Alder Riparian Woodland | Riparian | None | None | | Riparian woodland | | | Not present. |
| Southern Willow Scrub | Southern Willow Scrub | Riparian | None | None | | Riparian scrub | | | Not present. |
| Sphenopholis obtusata | prairie wedge grass | Monocots | None | None | 2B.2 | Cismontane woodland \| Meadow & seep \| Wetland | Cismontane woodland, meadows and seeps. | Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Streptanthus bernardinus | Laguna Mountains jewelflower | Dicots | None | None | 4.3 | Chaparral \| Lower montane coniferous forest \| Upper montane coniferous forest | Chaparral, lower montane coniferous forest. | Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. 1440-2500 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Rare Plant Rank | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Streptanthus campestris | southern jewelflower | Dicots | None | None | 1B.3 | Chaparral \| Lower montane coniferous forest \| Pinon & juniper woodlands | Chaparral, lower montane coniferous forest, pinyon and juniper woodland. | Open, rocky areas. 605-2590 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Symphyotrichum defoliatum | San Bernardino aster | Dicots | None | None | 1B.2 | Cismontane woodland \| Coastal scrub \| Lower montane coniferous forest \| Marsh & swamp \| Meadow & seep \| Valley & foothill grassland | Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. | Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m. | No habitat for this species is present on the project site. **This species is not present.** |
| Thelypteris puberula var. sonorensis | Sonoran maiden fern | Ferns | None | None | 2B.2 | Meadow & seep \| Wetland | Meadows and seeps. | Along streams, seepage areas. 60-930 m. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Accipiter cooperii | Cooper's hawk | Birds | None | None | CDFW_WL-Watch List \| IUCN_LC-Least Concern | Cismontane woodland \| Riparian forest \| Riparian woodland \| Upper montane coniferous forest | Woodland, chiefly of open, interrupted or marginal type. | Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks. | No habitat for this species is present on the project site. **This species is not present.** |
| Agelaius tricolor | tricolored blackbird | Birds | None | Threatened | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_EN-Endangered \| NABCI_RWL-Red Watch List \| USFWS_BCC-Birds of Conservation Concern | Freshwater marsh \| Marsh & swamp \| Swamp \| Wetland | Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. | Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. | No habitat for this species is present on the project site. **This species is not present.** |
| Aimophila ruficeps canescens | southern California rufous-crowned sparrow | Birds | None | None | CDFW_WL-Watch List | Chaparral \| Coastal scrub | Resident in Southern California coastal sage scrub and sparse mixed chaparral. | Frequents relatively steep, often rocky hillsides with grass and forb patches. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Anniella stebbinsi | Southern California legless lizard | Reptiles | None | None | CDFW_SSC-Species of Special Concern \| USFS_S-Sensitive | Broadleaved upland forest \| Chaparral \| Coastal dunes \| Coastal scrub | Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. | Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Antrozous pallidus | pallid bat | Mammals | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| USFS_S-Sensitive \| WBWG_H-High Priority | Chaparral \| Coastal scrub \| Desert wash \| Great Basin grassland \| Great Basin scrub \| Mojavean desert scrub \| Riparian woodland \| Sonoran desert scrub \| Upper montane coniferous forest \| Valley & foothill grassland | Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. | Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. | No habitat for this species is present on the project site. **This species is not present.** |
| Arizona elegans occidentalis | California glossy snake | Reptiles | None | None | CDFW_SSC-Species of Special Concern | | Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. | Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Artemisiospiza belli belli | Bell's sage sparrow | Birds | None | None | CDFW_WL-Watch List \| USFWS_BCC-Birds of Conservation Concern | Chaparral \| Coastal scrub | Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. | Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart. | No habitat for this species is present on the project site. **This species is not present.** |
| Aspidoscelis hyperythra | orange-throated whiptail | Reptiles | None | None | CDFW_WL-Watch List \| IUCN_LC-Least Concern \| USFS_S-Sensitive | Chaparral \| Cismontane woodland \| Coastal scrub | Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. | Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites. | No habitat for this species is present on the project site. **This species is not present.** |
| Aspidoscelis tigris stejnegeri | coastal whiptail | Reptiles | None | None | CDFW_SSC-Species of Special Concern | | Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. | Ground may be firm soil, sandy, or rocky. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Athene cunicularia | burrowing owl | Birds | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| USFWS_BCC-Birds of Conservation Concern | Coastal prairie \| Coastal scrub \| Great Basin grassland \| Great Basin scrub \| Mojavean desert scrub \| Sonoran desert scrub \| Valley & foothill grassland | Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. | Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. | No burrows or suitable habitat was found to exist on site. **This species is not present.** |
| Batrachoseps gabrieli | San Gabriel slender salamander | Amphibians | None | None | IUCN_DD-Data Deficient \| USFS_S-Sensitive | Talus slope | Known only from the San Gabriel Mtns. Found under rocks, wood, and fern fronds, and on soil at the base of talus slopes. | Most active on the surface in winter and early spring. | No habitat for this species is present on the project site. **This species is not present.** |
| Bombus crotchii | Crotch bumble bee | Insects | None | None | | | Coastal California east to the Sierra-Cascade crest and south into Mexico. | Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Bombus morrisoni | Morrison bumble bee | Insects | None | None | IUCN_VU-Vulnerable | | From the Sierra-Cascade ranges eastward across the intermountain west. | Food plant genera include Cirsium, Cleome, Helianthus, Lupinus, Chrysothamnus, and Melilotus. | No habitat for this species is present on the project site. **This species is not present.** |
| Buteo regalis | ferruginous hawk | Birds | None | None | CDFW_WL-Watch List \| IUCN_LC-Least Concern \| USFWS_BCC-Birds of Conservation Concern | Great Basin grassland \| Great Basin scrub \| Pinon & juniper woodlands \| Valley & foothill grassland | Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. | Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles. | No habitat for this species is present on the project site. **This species is not present.** |
| Buteo swainsoni | Swainson's hawk | Birds | None | Threatened | BLM_S-Sensitive \| IUCN_LC-Least Concern \| USFWS_BCC-Birds of Conservation Concern | Great Basin grassland \| Riparian forest \| Riparian woodland \| Valley & foothill grassland | Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. | Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Catostomus santaanae | Santa Ana sucker | Fish | Threatened | None | AFS_TH-Threatened \| IUCN_VU-Vulnerable | Aquatic \| South coast flowing waters | Endemic to Los Angeles Basin south coastal streams. | Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae. | No habitat for this species is present on the project site. **This species is not present.** |
| Ceratochrysis longimala | Desert cuckoo wasp | Insects | None | None | | | | | No habitat for this species is present on the project site. **This species is not present.** |
| Chaetodipus fallax fallax | northwestern San Diego pocket mouse | Mammals | None | None | CDFW_SSC-Species of Special Concern | Chaparral \| Coastal scrub | Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. | Sandy, herbaceous areas, usually in association with rocks or coarse gravel. | No habitat for this species is present on the project site. **This species is not present.** |
| Chaetodipus fallax pallidus | pallid San Diego pocket mouse | Mammals | None | None | CDFW_SSC-Species of Special Concern | Desert wash \| Pinon & juniper woodlands \| Sonoran desert scrub | Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. | Sandy, herbaceous areas, usually in association with rocks or coarse gravel. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Charina umbratica | southern rubber boa | Reptiles | None | Threatened | USFS_S-Sensitive | Meadow & seep \| Riparian forest \| Riparian woodland \| Upper montane coniferous forest \| Wetland | Known from the San Bernardino and San Jacinto mtns; found in a variety of montane forest habitats. Snakes resembling C. umbratica reported from Mt. Pinos and Tehachapi mtns group with C. bottae based on mtDNA. Further research needed. | Found in vicinity of streams or wet meadows; requires loose, moist soil for burrowing; seeks cover in rotting logs, rock outcrops, and under surface litter. | No habitat for this species is present on the project site. **This species is not present.** |
| Cicindela tranquebarica viridissima | greenest tiger beetle | Insects | None | None | | Riparian woodland | Inhabits the woodlands adjacent to the Santa Ana River basin. | Usually found in open spots between trees. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Coccyzus americanus occidentalis | western yellow-billed cuckoo | Birds | Threatened | Endangered | BLM_S-Sensitive \| NABCI_RWL-Red Watch List \| USFS_S-Sensitive \| USFWS_BCC-Birds of Conservation Concern | Riparian forest | Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. | Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. | No habitat for this species is present on the project site. **This species is not present.** |
| Coleonyx variegatus abbotti | San Diego banded gecko | Reptiles | None | None | CDFW_SSC-Species of Special Concern | Chaparral \| Coastal scrub | Coastal and cismontane Southern California. | Found in granite or rocky outcrops in coastal scrub and chaparral habitats. | No habitat for this species is present on the project site. **This species is not present.** |
| Coturnicops noveboracensis | yellow rail | Birds | None | None | CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| NABCI_RWL-Red Watch List \| USFS_S-Sensitive \| USFWS_BCC-Birds of Conservation Concern | Freshwater marsh \| Meadow & seep | Summer resident in eastern Sierra Nevada in Mono County. | Freshwater marshlands. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Crotalus ruber | red-diamond rattlesnake | Reptiles | None | None | CDFW_SSC-Species of Special Concern \| USFS_S-Sensitive | Chaparral \| Mojavean desert scrub \| Sonoran desert scrub | Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. | Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects. | No habitat for this species is present on the project site. **This species is not present.** |
| Diadophis punctatus modestus | San Bernardino ringneck snake | Reptiles | None | None | USFS_S-Sensitive | | Most common in open, relatively rocky areas. Often in somewhat moist microhabitats near intermittent streams. | Avoids moving through open or barren areas by restricting movements to areas of surface litter or herbaceous veg. | No habitat for this species is present on the project site. **This species is not present.** |
| Dipodomys merriami parvus | San Bernardino kangaroo rat | Mammals | Endangered | Candidate Endangered | CDFW_SSC-Species of Special Concern | Coastal scrub | Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. | Needs early to intermediate seral stages. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Dipodomys stephensi | Stephens' kangaroo rat | Mammals | Endangered | Threatened | IUCN_EN-Endangered | Coastal scrub \| Valley & foothill grassland | Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. | Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil. | No habitat for this species is present on the project site. **This species is not present.** |
| Empidonax traillii extimus | southwestern willow flycatcher | Birds | Endangered | Endangered | NABCI_RWL-Red Watch List | Riparian woodland | Riparian woodlands in Southern California. | | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Emys marmorata | western pond turtle | Reptiles | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_VU-Vulnerable \| USFS_S-Sensitive | Aquatic \| Artificial flowing waters \| Klamath/North coast flowing waters \| Klamath/North coast standing waters \| Marsh & swamp \| Sacramento/San Joaquin flowing waters \| Sacramento/San Joaquin standing waters \| South coast flowing waters \| South coast stan | A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. | Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying. | No habitat for this species is present on the project site. **This species is not present.** |
| Eremophila alpestris actia | California horned lark | Birds | None | None | CDFW_WL-Watch List \| IUCN_LC-Least Concern | Marine intertidal & splash zone communities \| Meadow & seep | Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. | Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Euchloe hyantis andrewsi | Andrew's marble butterfly | Insects | None | None | | Lower montane coniferous forest | Inhabits yellow pine forest near Lake Arrowhead and Big Bear Lake, San Bernardino Mtns, San Bernardino Co, 5000-6000 ft. | Hostplants are Streptanthus bernardinus and Arabis holboellii var pinetorum; larval foodplant is Descurainia richardsonii. | No habitat for this species is present on the project site. **This species is not present.** |
| Eugnosta busckana | Busck's gallmoth | Insects | None | None | | Coastal dunes \| Coastal scrub | | | No habitat for this species is present on the project site. **This species is not present.** |
| Eumops perotis californicus | western mastiff bat | Mammals | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| WBWG_H-High Priority | Chaparral \| Cismontane woodland \| Coastal scrub \| Valley & foothill grassland | Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. | Roosts in crevices in cliff faces, high buildings, trees and tunnels. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Euphydryas editha quino | quino checkerspot butterfly | Insects | Endangered | None | | Chaparral \| Coastal scrub | Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. | Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens. | No habitat for this species is present on the project site. **This species is not present.** |
| Falco columbarius | merlin | Birds | None | None | CDFW_WL-Watch List \| IUCN_LC-Least Concern | Estuary \| Great Basin grassland \| Valley & foothill grassland | Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. | Clumps of trees or windbreaks are required for roosting in open country. | No habitat for this species is present on the project site. **This species is not present.** |
| Gila orcuttii | arroyo chub | Fish | None | None | AFS_VU-Vulnerable \| CDFW_SSC-Species of Special Concern \| USFS_S-Sensitive | Aquatic \| South coast flowing waters | Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave and San Diego river basins. | Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Glaucomys oregonensis californicus | San Bernardino flying squirrel | Mammals | None | None | CDFW_SSC-Species of Special Concern \| USFS_S-Sensitive | Broadleaved upland forest \| Lower montane coniferous forest | Known from black oak or white fir dominated woodlands between 5200 - 8500 ft in the San Bernardino and San Jacinto ranges. May be extirpated from San Jacinto range. | Needs cavities in trees/snags for nests and cover. Needs nearby water. | No habitat for this species is present on the project site. **This species is not present.** |
| Haliaeetus leucocephalus | bald eagle | Birds | Delisted | Endangered | BLM_S-Sensitive \| CDF_S-Sensitive \| CDFW_FP-Fully Protected \| IUCN_LC-Least Concern \| USFS_S-Sensitive \| USFWS_BCC-Birds of Conservation Concern | Lower montane coniferous forest \| Oldgrowth | Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. | Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Icteria virens | yellow-breasted chat | Birds | None | None | CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern | Riparian forest \| Riparian scrub \| Riparian woodland | Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. | Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground. | No habitat for this species is present on the project site. **This species is not present.** |
| Lanius ludovicianus | loggerhead shrike | Birds | None | None | CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| USFWS_BCC-Birds of Conservation Concern | Broadleaved upland forest \| Desert wash \| Joshua tree woodland \| Mojavean desert scrub \| Pinon & juniper woodlands \| Riparian woodland \| Sonoran desert scrub | Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. | Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting. | No habitat for this species is present on the project site. **This species is not present.** |
| Lasiurus xanthinus | western yellow bat | Mammals | None | None | CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| WBWG_H-High Priority | Desert wash | Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. | Roosts in trees, particularly palms. Forages over water and among trees. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Laterallus jamaicensis coturniculus | California black rail | Birds | None | Threatened | BLM_S-Sensitive \| CDFW_FP-Fully Protected \| IUCN_NT-Near Threatened \| NABCI_RWL-Red Watch List \| USFWS_BCC-Birds of Conservation Concern | Brackish marsh \| Freshwater marsh \| Marsh & swamp \| Salt marsh \| Wetland | Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. | Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | No habitat for this species is present on the project site. **This species is not present.** |
| Lepus californicus bennettii | San Diego black-tailed jackrabbit | Mammals | None | None | CDFW_SSC-Species of Special Concern | Coastal scrub | Intermediate canopy stages of shrub habitats and open shrub / herbaceous and tree / herbaceous edges. | Coastal sage scrub habitats in Southern California. | No habitat for this species is present on the project site. **This species is not present.** |
| Neolarra alba | white cuckoo bee | Insects | None | None | | | Known only from localities in Southern California. | Cleptoparasitic in the nests of perdita bees. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Neotoma lepida intermedia | San Diego desert woodrat | Mammals | None | None | CDFW_SSC-Species of Special Concern | Coastal scrub | Coastal scrub of Southern California from San Diego County to San Luis Obispo County. | Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes. | No habitat for this species is present on the project site. **This species is not present.** |
| Nyctinomops femorosaccus | pocketed free-tailed bat | Mammals | None | None | CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| WBWG_M-Medium Priority | Joshua tree woodland \| Pinon & juniper woodlands \| Riparian scrub \| Sonoran desert scrub | Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. | Rocky areas with high cliffs. | No habitat for this species is present on the project site. **This species is not present.** |
| Oncorhynchus mykiss irideus pop. 10 | steelhead - southern California DPS | Fish | Endangered | None | AFS_EN-Endangered | Aquatic \| South coast flowing waters | Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). | Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Onychomys torridus ramona | southern grasshopper mouse | Mammals | None | None | CDFW_SSC-Species of Special Concern | Chenopod scrub | Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. | Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects. | No habitat for this species is present on the project site. **This species is not present.** |
| Perognathus alticola alticola | white-eared pocket mouse | Mammals | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_EN-Endangered \| USFS_S-Sensitive | Lower montane coniferous forest \| Mojavean desert scrub \| Pinon & juniper woodlands | Ponderosa and Jeffrey pine habitats; also in mixed chaparral and sagebrush habitats in the San Bernardino Mountains. | Burrows are constructed in loose soil. | No habitat for this species is present on the project site. **This species is not present.** |
| Perognathus longimembris brevinasus | Los Angeles pocket mouse | Mammals | None | None | CDFW_SSC-Species of Special Concern | Coastal scrub | Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. | Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Phrynosoma blainvillii | coast horned lizard | Reptiles | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern | Chaparral \| Cismontane woodland \| Coastal bluff scrub \| Coastal scrub \| Desert wash \| Pinon & juniper woodlands \| Riparian scrub \| Riparian woodland \| Valley & foothill grassland | Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. | Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects. | No habitat for this species is present on the project site. **This species is not present.** |
| Polioptila californica californica | coastal California gnatcatcher | Birds | Threatened | None | CDFW_SSC-Species of Special Concern \| NABCI_YWL-Yellow Watch List | Coastal bluff scrub \| Coastal scrub | Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. | Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Rana draytonii | California red-legged frog | Amphibians | Threatened | None | CDFW_SSC-Species of Special Concern \| IUCN_VU-Vulnerable | Aquatic \| Artificial flowing waters \| Artificial standing waters \| Freshwater marsh \| Marsh & swamp \| Riparian forest \| Riparian scrub \| Riparian woodland \| Sacramento/San Joaquin flowing waters \| Sacramento/San Joaquin standing waters \| South coast flowi | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. | Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Rana muscosa | southern mountain yellow-legged frog | Amphibians | Endangered | Endangered | CDFW_WL-Watch List \| IUCN_EN-Endangered \| USFS_S-Sensitive | Aquatic | Disjunct populations known from southern Sierras (northern DPS) and San Gabriel, San Bernardino, and San Jacinto Mtns (southern DPS). Found at 1,000 to 12,000 ft in lakes and creeks that stem from springs and snowmelt. May overwinter under frozen lakes. | Often encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development. | No habitat for this species is present on the project site. **This species is not present.** |
| Rhaphiomidas terminatus abdominalis | Delhi Sands flower-loving fly | Insects | Endangered | None | | Interior dunes | Found only in areas of the Delhi Sands formation in southwestern San Bernardino and northwestern Riverside counties. | Requires fine, sandy soils, often with wholly or partly consolidated dunes and sparse vegetation. Oviposition req. shade. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Rhinichthys osculus ssp. 8 | Santa Ana speckled dace | Fish | None | None | AFS_TH-Threatened \| CDFW_SSC-Species of Special Concern \| USFS_S-Sensitive | Aquatic \| South coast flowing waters | Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. | Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles. | No habitat for this species is present on the project site. **This species is not present.** |
| Salvadora hexalepis virgultea | coast patch-nosed snake | Reptiles | None | None | CDFW_SSC-Species of Special Concern | Coastal scrub | Brushy or shrubby vegetation in coastal Southern California. | Require small mammal burrows for refuge and overwintering sites. | No habitat for this species is present on the project site. **This species is not present.** |
| Setophaga petechia | yellow warbler | Birds | None | None | CDFW_SSC-Species of Special Concern \| USFWS_BCC-Birds of Conservation Concern | Riparian forest \| Riparian scrub \| Riparian woodland | Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. | Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Spea hammondii | western spadefoot | Amphibians | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_NT-Near Threatened | Cismontane woodland \| Coastal scrub \| Valley & foothill grassland \| Vernal pool \| Wetland | Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. | Vernal pools are essential for breeding and egg-laying. | No habitat for this species is present on the project site. **This species is not present.** |
| Spinus lawrencei | Lawrence's goldfinch | Birds | None | None | IUCN_LC-Least Concern \| NABCI_YWL-Yellow Watch List \| USFWS_BCC-Birds of Conservation Concern | Broadleaved upland forest \| Chaparral \| Pinon & juniper woodlands \| Riparian woodland | Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. | Closely associated with oaks. | No habitat for this species is present on the project site. **This species is not present.** |
| Streptocephalus woottoni | Riverside fairy shrimp | Crustaceans | Endangered | None | IUCN_EN-Endangered | Coastal scrub \| Valley & foothill grassland \| Vernal pool \| Wetland | Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. | Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Taxidea taxus | American badger | Mammals | None | None | CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern | Alkali marsh \| Alkali playa \| Alpine \| Alpine dwarf scrub \| Bog & fen \| Brackish marsh \| Broadleaved upland forest \| Chaparral \| Chenopod scrub \| Cismontane woodland \| Closed-cone coniferous forest \| Coastal bluff scrub \| Coastal dunes \| Coastal prairie \| | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. | Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows. | No habitat for this species is present on the project site. **This species is not present.** |
| Thamnophis hammondii | two-striped gartersnake | Reptiles | None | None | BLM_S-Sensitive \| CDFW_SSC-Species of Special Concern \| IUCN_LC-Least Concern \| USFS_S-Sensitive | Marsh & swamp \| Riparian scrub \| Riparian woodland \| Wetland | Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. | Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth. | No habitat for this species is present on the project site. **This species is not present.** |

| Scientific Name | Common Name | Taxon Group | Federal List | State List | Other Status | Habitats | General Habitat | Micro Habitat | Presence/ Absence |
|---|---|---|---|---|---|---|---|---|---|
| Vireo bellii pusillus | least Bell's vireo | Birds | Endangered | Endangered | IUCN_NT-Near Threatened \| NABCI_YWL-Yellow Watch List | Riparian forest \| Riparian scrub \| Riparian woodland | Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. | Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. | No habitat for this species is present on the project site. **This species is not present.** |

# APPENDIX C

View of ruderal habitat on northern portion of the project site from the east facing west.

View of ruderal habitat on southern portion of the project site facing southeast. Evidence of recent weed abatement activities.

View of ruderal habitat on northwest portion of the project site.

Hernandez Environmental Services

View of ruderal habitat on southern portion of the project site from the western border facing east.

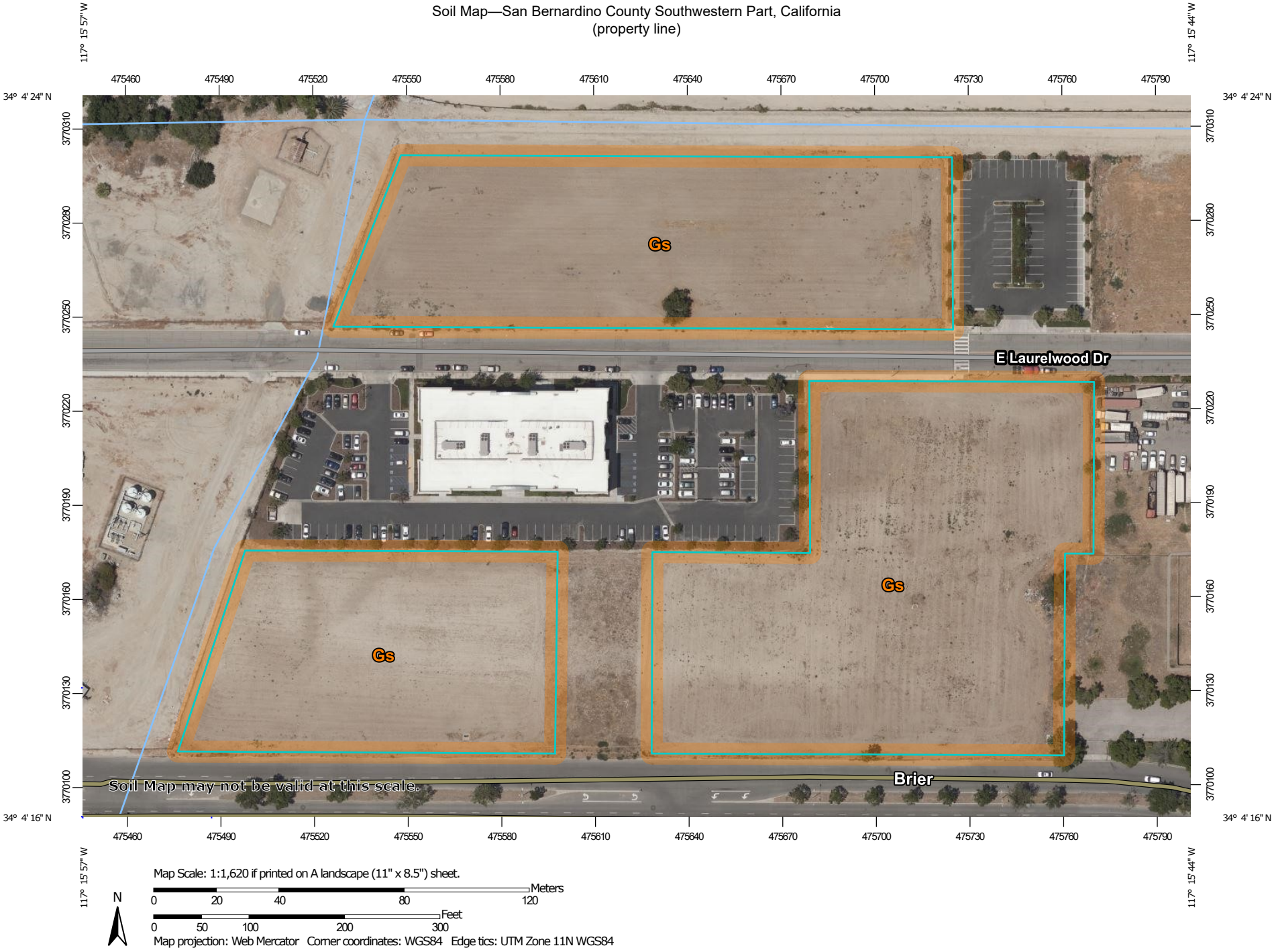
View of ruderal habitat along East Brier Drive on southern portion of the project site.

View of ruderal habitat on southeast portion of project site.

Hernandez Environmental Services

# APPENDIX D

Soil Map—San Bernardino County Southwestern Part, California
(property line)




Map Scale: 1:1,620 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 13, Sep 13, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2018—Jun 30, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| Gs | Grangeville fine sandy loam, saline-alkali | 7.7 | 100.0% |
| **Totals for Area of Interest** | | **7.7** | **100.0%** |

# APPENDIX E

Huffman
*Environmental*

# RARE PLANT REPORT

## HARDT AND BRIER PROJECT

-2023-

Prepared for:

*Hernandez Environmental*

17037 Lakeshore Drive
Lake Elsinore, CA 92530
Office: (951) 579-1652

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# 1. INTRODUCTION

Hernandez Environmental Services (HES) and Huffman Environmental, LLC were retained to conduct rare plant surveys that support residential project permitting for the Hardt and Brier Project (herein Project) in San Bernardino, San Bernardino County, California. The three Project parcels consisting of approximately 7.76 acres is located within the San Bernardino South USGS 7.5-minute Quadrangle.

Surveys were conducted and completed on May 20th 2023, and results documented one rare plant species, known as the smooth tarplant (*Centromadia pungens ssp. laevis*) (CNPS ranking 4.2). No other rare plants species were recorded on site.

## 1.1 Property Description

### 1.1.1 Geographic Setting

The Project is between the I-10 San Bernardino Freeway and Santa Ana River. The Project consists of three parcels, two of them located between East Hardt Street and East Brier Drive with the remaining one north of those between East Hardt Street and the Metrolink. All three of the project boundaries are adjacent to the U.S. Citizenship and Immigration Services building at 995 Hardt Street, San Bernardino, CA, 92408 (Figure 1).. The parcel is undeveloped and topographically flat with disturbed soil from annual dozer ripping.

### 1.1.2 Adjacent Lands

The Project is situated in the southwestern portion of San Bernardino County and within a commercial neighborhood district consisting of development and ornamental landscape. Few similar, undeveloped parcels remain in proximity to the Project. The Santa Ana River is 0.5 miles north of the Project running east and west.

### 1.1.3 Geology, Hydrology, Soils and Climate

The relationship between rare plants and environmental factors is intricate. Geology influences soil composition and availability of specific minerals, while hydrology affects water availability and distribution. Soils provide physical support, nutrients, and water to plants, and climate determines the overall suitability of a habitat. The combination of these factors shapes the unique

ecological niches and adaptations of rare plant species, making them sensitive to changes in their environment.

The land formation history within the San Bernardino South quadrangle is shaped by a complex interplay of geological processes that have occurred over millions of years.

The San Bernardino area is primarily influenced by two major faults: the San Andreas Fault and the San Jacinto Fault. These faults are part of the larger tectonic boundary known as the San Andreas Fault system, which extends for approximately 800 miles through California. The San Andreas Fault is located to the north of the San Bernardino area, primarily running through the San Bernardino Mountains and the Mojave Desert. The San Jacinto fault runs parallel to this east of the San Bernardino area, traversing the San Jacinto Mountains and Coachella Valley. Both fault systems are characterized by right-lateral strike-slip motions.

The region's basement rocks, which underlie the surface formations, are primarily composed of metamorphic and igneous rocks from the Pre-Cenozoic Era. During the Cenozoic Era, which began approximately 66 million years ago, is particularly significant for understanding the land formation in the San Bernardino South quadrangle. Tectonic forces, primarily related to the San Andreas Fault system, has been responsible for horizontal displacement and the formation of mountain ranges. Volcanic activity occurring during this time, resulted in the formation of volcanic rocks, including basalt, and volcanic land-forms such as cinder cones and lava flows. These volcanic processes contributed to the shaping of the landscape. Sedementary processes consisting of erosion, transport, and deposition of sediments played a large role in also shaping the region. This erosion along with water flowing from nearby mountain ranges, created alluvial fans and floodplains that spread out among flatter terrain. During the Quaternary Period, the most recent geological period beginning approximately 2.6 millions years ago to present day, land-forms and sedimentation patterns from glacial and interglacial periods were formed. These glacial melts and alluvial processes played a role in the deposition of sediments and certain land formation.

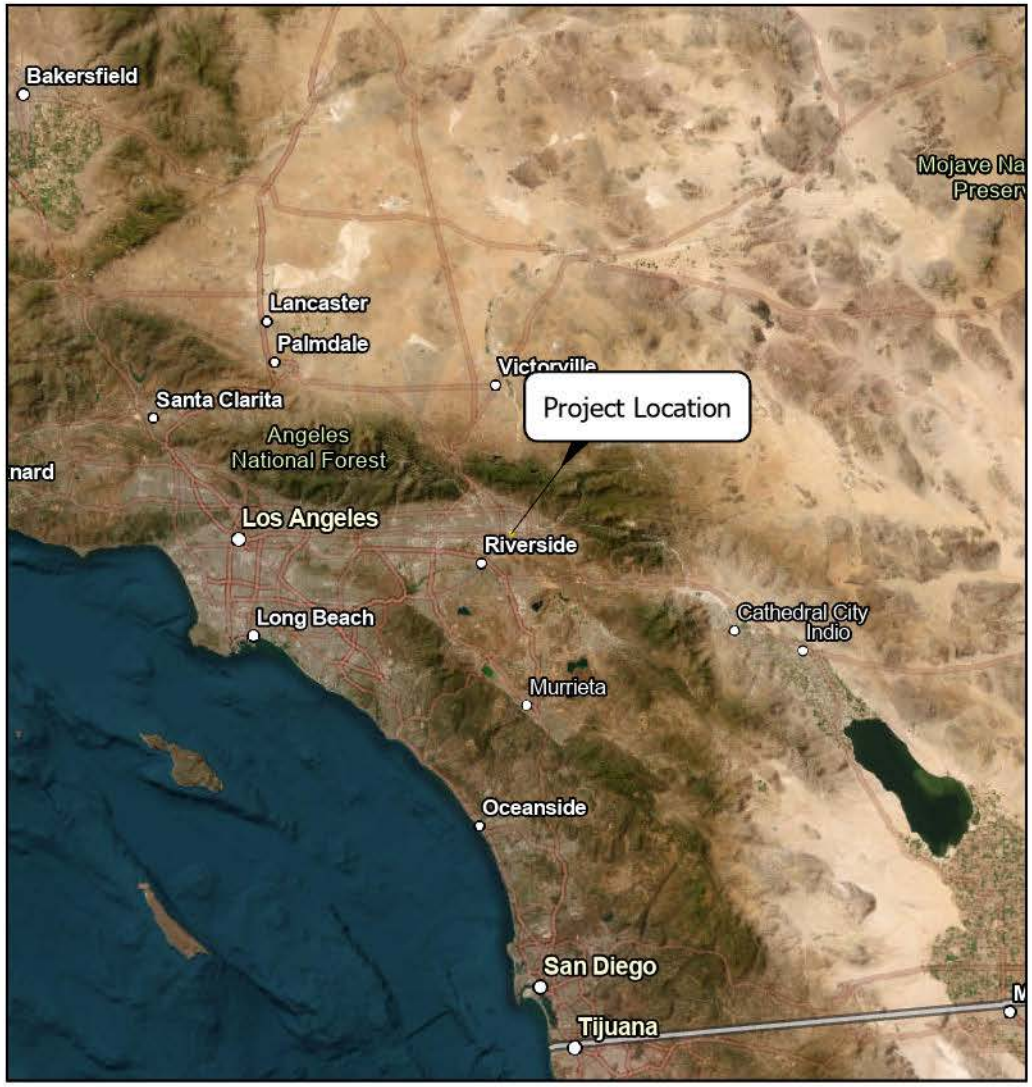
North of the project site by 0.5 miles lies the Santa Ana River running east to west, influencing the local soil composition. All three parcels are characterized by the Grangeville series that consists of very deep, somewhat poorly drained soils that formed in moderate coarse textured alluvium dominantly from granitic rock sources. Grangeville soils are on alluvial fans and

floodplains and have slopes ranging from 0 to 2 percent. The mean annual precipitation is about 12 inches and the mean annual temperature is about 63 degrees F. Areas made up of Grangeville soils are used intensively for growing alfalfa, grapes, cotton, truck crops and irrigated pastures while some areas are being urbanized. Vegetation in uncultivated areas is annual grasses and forbs with native alkali-tolerant plants.

**Table 1. Soil Composition**

| Soil Acronym | Soils Map Unit | Acres in Project | Percent of Project |
|---|---|---|---|
| Gr | Grangeville Series: Alluvial fans; Slopes 0 to 2% | 7.76 | 100% |

Source: University of California: Agriculture and Natural Resources (UofC) (2023a)



Huffman ENVIRONMENTAL

# Figure 1: Project Vicinity and Location

**Hardt and Brier Project: Rare Plant Surveys**

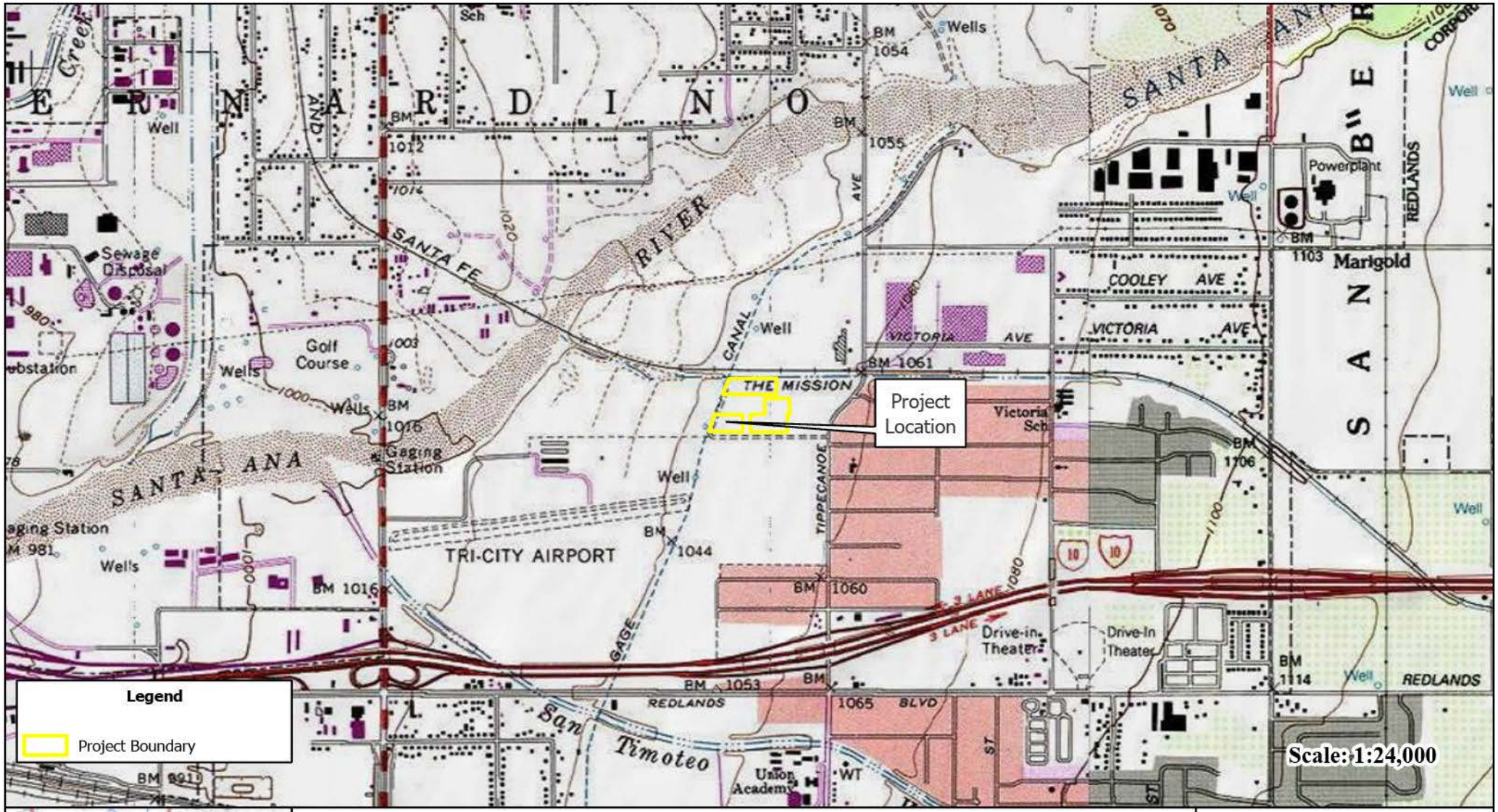
2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

N

0 0.07 0.15 Mi

0 0.13 0.25 Km




# Figure 2: USGS Project Location Map

**Hardt and Brier Project: Rare Plant Surveys**

2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

N

0 0.25 0.5 Mi

0 0.47 0.95 Km

## 2. METHODS

### 2.1 Background Analysis

Various sources were consulted and reviewed for regional plant records prior to undertaking field surveys. The analysis included a review of records from the following sources:

- Documented rare plant occurrences in a 9-Quad search compiled from the California Natural Diversity Data Base (CNDDB) by the California Department of Fish and Wildlife, 2023
- A review of documented occurrences of common and rare plants for California at the online website Calflora, 2023
- Species descriptions from the Jepson Online Interchange via the Jepson Herbarium, 2023
- Documented rare plant occurrences in a 9-Quad search compiled in the Inventory of Rare Plants by the California Native Plant Society (CNPS), 2023
- Aerial photographs from Google Earth and ESRI basemaps, 2023

The background analysis yielded data was compiled in a Geographic Information System (GIS) system using ArcGIS Pro and ArcGIS Online (AGOL)software programs. Data was converted and uploaded to AGOL and subsequently onto ArGIS Field Maps (mobile GIS software) to use in the field as a reference and for collecting field data.

Site precipitation levels were assessed and compiled in Table 1 and compared with the combined list of potential rare plant species observed in the region to determine site visit timing. Levels are also compared with past precipitation recordings in 2021 and 2022 .

**Tale 2: Precipitation Levels in San Bernardino (recorded in inches)**

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021 | 0.13 | 0.02 | 0.05 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | T | 0.03 | 0.00 | 0.35 | 0.05 |
| 2022 | 0.00 | 0.01 | 0.03 | 0.10 | 0.01 | 0.11 | M | T | 0.10 | 0.10 | 0.69 | 0.22 | 0.12 |
| 2023 | 0.57 | 0.47 | 0.61 | 0.04 | 0.09 | 0.00 | M | M | M | M | M | M | 0.30 |
| **Mean** | 0.24 | 0.17 | 0.23 | 0.04 | 0.03 | 0.04 | 0.01 | 0.00 | 0.05 | 0.06 | 0.35 | 0.29 | 0.16 |
| **Max** | 0.57<br>2023 | 0.47<br>2023 | 0.61<br>2023 | 0.10<br>2022 | 0.09<br>2023 | 0.11<br>2022 | 0.01<br>2021 | 0.00<br>2021 | 0.10<br>2022 | 0.10<br>2022 | 0.69<br>2022 | 0.35<br>2021 | 0.30 |
| **Min** | 0.00<br>2022 | 0.01<br>2022 | 0.03<br>2022 | 0.00<br>2021 | 0.00<br>2021 | 0.00<br>2021 | 0.01<br>2021 | T<br>2022 | T<br>2021 | 0.03<br>2021 | 0.00<br>202 | 0.22<br>202 | 0.05 |

Source: National Oceanic and atmospheric Administration National Weather Service (NOAA (2023). M &T: missing data.

## 2.2 Field Surveys

Huffman Environmental botanist, Ryan Meszaros, conducted a rare plant survey on May 20th, 2023 within all Project parcels. The surveyors noted environmental conditions and documented all plant species observed.. Plants not readily identified in the field were collected and pressed for subsequent identification.

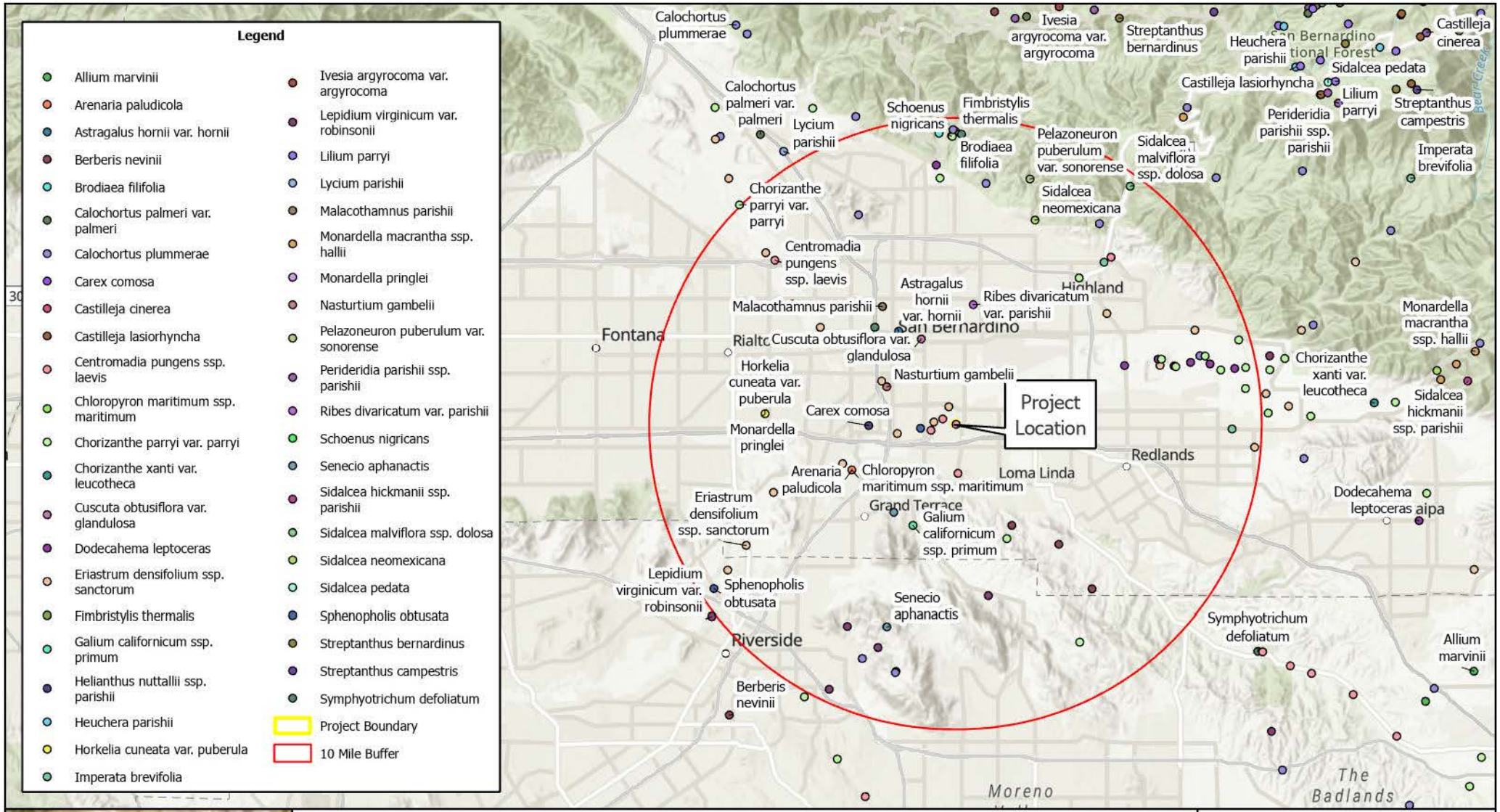
The property was systematically surveyed by walking all accessible portions ensuring that all habitats were afforded sufficient coverage to be defensible and properly inventoried. Roughly parallel transects were spaced approximately 10 to 12 meters since the open habitat of the site were dominated by invasive grasses and weedy forbs allowing for greater visibility. Greater focus was prioritized in areas likely to support the list of CNNDB and CNPS target species.

A complete list of plants observed is included as Appendix A of this report. All plant nomenclature in this report follows the Jepson Manual.

# 3 RESULTS

## 3.1 Preliminary Analysis

The preliminary analysis of known and documented occurrences of the rare plant species evaluated in the study revealed populations of several sensitive plants near the property, with one species located within the Project (Figure 3). Numerous species from the CNDDB and CNPS 9-Quad queries were identified as unlikely to occur due to the Project not meeting the minimum habitat requirements for occurrence. If any species habitat requirements were met, they were identified as potentially able to occur onsite. One species, the smooth tarplant (*Centromadia pungens ssp. laevis*) was documented in the CNDDB at the southeast parcel of the Project in 2003. The following are descriptions of plants compiled from the CNDDB and CNPS query that met distribution and biological factors and used to evaluate the potential presence of the species within a 10-mile radius.




# Figure 3: CNDDB Rare Plant Occurrences

**Hardt and Brier Project: Rare Plant Surveys**
**10 Mile CNDDB Search Buffer**

2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

**Thread-leaved Brodiaea**

Thread-leaved Brodiaea (*Brodiaea filifolia*) is a perennial herbaceous plant with slender and erect stems that can reach heights of about 8 to 20 inches (20 to 50 cm). The stems are typically unbranched and leafless, except for a few small bracts at the base. As the common name suggests, the distinguishing feature of this plant is its thread-like leaves. The leaves are extremely narrow and filamentous, giving the plant a delicate and graceful appearance. The leaves are typically shorter than the flowering stem and can be up to 12 inches (30 cm) long. The flowers are borne in compact clusters at the top of the stem. Each cluster contains several tubular-shaped flowers with six distinct tepals (petal-like structures). The flower color can vary but is often shades of blue or purple, occasionally white. The flowers bloom in late spring or early summer. This species is listed both state and federally as Threatened and is ranked by CNPS as 1B.1.

**Smooth Tarplant**

Smooth tarplant (*Centromadia pungens ssp. laevis*), is an annual herb with an erect or spreading growth habit. It typically grows to a height of about 8 to 24 inches (20 to 60 cm). The stems are usually green or reddish in color and can be smooth or slightly hairy. The leaves are linear to lanceolate in shape and arranged alternately along the stems. They are typically smooth, lacking hairs or with minimal hairiness. The leaves can range in color from green to grayish-green.The flowers are small and arranged in compact clusters or heads at the tips of the stems. Each flower head contains multiple yellow disc florets surrounded by yellow to orange ray florets. The flower heads can form attractive displays when in bloom.This species was detected and documented in two of the three Project parcels. (Figure 4) It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 1B.1

**Parry's Spineflower**

Parry's spineflower (*Chorizanthe parryi var. parryi*) is a low-growing perennial herb that forms dense mats on the ground. It has multiple prostrate or ascending stems that can reach lengths of about 4 to 16 inches (10 to 40 cm). The stems are often reddish or purplish in color.The flowers of Parry's spineflower are small and inconspicuous. They are densely clustered together in compact spike-like structures called inflorescences. The flower color can vary from greenish-white to pinkish or reddish. Each individual flower has five petal-like lobes and is surrounded by spiny bracts. It is not state or federally listed as Threatened or Endangered, but is CNPS ranked

1B.1

**Plummer's Mariposa Lily**

Plummer's mariposa lily (*Calochortus plummerae*) is a species of flowering plant in the family Liliaceae. It is a perennial herbaceous plant that grows from a bulb. It produces a single erect stem that ca reach heights of up to60 centimeters (24 inches). The stem is slender and leafy, with lance-shaped leaves arranged in whorls or alternate patterns along its length. Plummer's mariposa lily is known for its ecological specialization, as it typically grows in specific habitats such as coastal sage scrub, chaparral, and oak woodlands. It prefers well-drained soils and can withstand dry and arid conditions. The plant is adapted to the Mediterranean climate of California, with hot and dry summers and mild, wet winters.

**Bristly Sedge**

Bristly sedge, (*Carex comosa*) is a clump-forming sedge that typically grows in wetland habitats such as marshes, swamps, and streambanks. It is characterized by its dense, tufted growth habit ad long, slender leaves. The leave are typically green and have a grass-like appearance, with rough or bristly edges that give the plant its common name. During the flowering season, bristly sedge produces inconspicuous, small flowers. The flowers are typically brownish-green and arranged in spikelets that are held above the foliage on slender stems. These spikelets can be either male or female, with the female spikelets developing into small, seed-bearing fruits.It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 2B.1

**Slender-horned Spineflower**

Slender-horne spinefower (*Dodecahema leptoceras*) is an annual herb with a distinctive appearance. It typically grows in open, sandy or gravelly soils in coastal dunes, coastal scrub, and grasslands. Te plant has a branching stem that can reach up to 60 centimeters (24 inches) in height. The leaves are narrow, linear, and often covered with fine hairs.The most notable feature of the slender-horned spineflower is its unique flower structure. The flowers are small and inconspicuous, with white or pinkish petals. This plant is distinctive by its three prominent, slender, horn-like bracts that surround the flowers. These bracts give the plant its common name, as they resemble spines or horns. Slender-horned spineflower typically blooms in the spring.This species is listed both state and federally as Endangered and is ranked by CNPS as 1B.1.

**Santa Ana River Woollystar**

Santa Ana River woollystar (*Eriastrum densifolium ssp. sanctorum*) is a perennial herbaceous plant that typically grows in grasslands, meadows, and open areas. It has a compact and bushy growth habit with densely arranged leaves along its stems. The leaves are narrow and elongated, often covered in fine hairs. During the flowering season, which typically occurs in the spring and summer, it produces clusters of vibrant and showy flowers. The flowers are typically shades of blue or purple, although variations in color may occur. Each flower consists of five petals fused at the base to form a tube-like structure, with the petals spreading outwards into a star-like shape.This species is listed both state and federally as Endangered and is ranked by CNPS as 1B.1.

**California Satintail**

California satintail (*Imperata brevifolia*) is a warm-season grass with a clumping growth habit. It typically forms dense tufts or patches of grass, reaching heights of about 30 to 60 centimeters (12 to 24 inches). The grass blads are narrow, linear, and typically green or bluish-green in color. One distinguishing feature is the presence of fine hairs along the leaf blades, which give them a silky or satiny appearance. This grass species is adapted to arid and semi-arid environments and is often found in desert scrub, grasslands, and rocky slopes. It has the ability to tolerate drought and high temperatures. Satintail is a perennial plant, meaning it lives for multiple years and regrows from its base each growing season. During the flowering period, Imperata brevifolia produces flowering stems or spikes that rise above the foliage. The spike-like inflorescences are typically reddish or purplish in color and bear small flowers. The flowers are wind-pollinated, and after pollination, they develop into small, grain-like fruits.It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 2B.1.

**Robinson's Pepper-grass**

Ronbinso’s pepper-grass (*Lepidium virginicum var. robinsoni*) is a variety of Lepidium virginicum, commonly known as Virginia pepperweed or peppergrass. It is a flowering plant in the mustard family, Brasicaceae. Lepidium virgiicum var. robinsonii is a herbaceous annual or biennial plant that grows in a rosette form. It has lobed or toothed leaves that are green and elongated. The plant produces slender, erect flowering stems that can reach heights of up to 60 centimeters (24 inches). The stems are typically covered in fine hairs.During the flowering

season it bears clusters of small, white flowers on the terminal ends of the stems. The flowers have four petals and a distinctive arrangement, forming a cross shape, which is a characteristic of the Brassicaceae family. After pollination, the plant produces small, round fruits. It is often found in disturbed habitats, including roadsides, fields, and open areas. It is adaptable to a variety of soil types and can tolerate both wet and dry conditions. As with other varieties, this plant has a pungent and peppery taste, hence its common name "pepperweed." It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 4.3.

**Chaparral Ragwort**

Chaparral ragwort (*Senecio aphanactis*) is a species of flowering plant in the family Asteraceae. It is also commonly known as rayless ragwort or threadleaf groundsel. The plant is native to western North America and can be found in various habitats such as meadows, grasslands, and open woodlands. It is a perennial herbaceous plant with a slender and delicate appearance. It typically grows in clumps and has long, thread-like leaves that give it the common name "threadleaf." The leaves are usually gray-green in color and may have fine hairs or a woolly texture. During the blooming season, it produces small flower heads that are typically yellow or yellowish-green in color. The flower heads lack ray florets, which are the strap-like petals typically seen in many members of the Asteraceae family. Instead, the flower heads consist only of disc florets, which are tubular in shape and clustered together.It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 2B.2.

**Salt Spring Checkerbloom**

The salt spring checkerbloom (*Sidalcea neomexicana*) is a species of flowering plant in the mallow family, Malvaceae. It is a herbaceous perennial plant that typically grows in moist habitats such as meaows, stream banks, and muntain slopes. It forms a basal rosette of leaves and sends up erect flowering stems that can reach heights of about 30 to 90 centimeters (12 to 35 inches). The leaves are palmately lobed or divided, giving them a distinctive shape. During the blooming season, which typically occurs in the spring and summer, it produces clusters of showy, pink to purple flowers. The flowers are cup-shaped and have five petals, which may have a darker throat or center. They are arranged in terminal spikes or racemes atop the stems. It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 1B.2.

**San Bernardino Aster**

San Bernardino aster (*Symphyotrichum defoliatum*) is a species of flowering plant in the Asteraceae family. It is a perennial herbaceous plant that typically grows in dry, open habitats such as meadows, prairies, and roadsides. It reaches heights of about 30 to 90 centimeters (12 to 35 inches) and has erect stems with narrow, lance-shaped leaves. The leaves are usually smooth or slightly hairy, and their edges may be toothed or smooth. During the blooming season, which usually occurs in late summer to early fall, it produces numerous small flowers in clusters at the tips of the stems. The flowers have daisy-like appearance with purple, pink, or white ray florets surrounding a yellow center of disc florets. It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 1B.2.

**Parry's Spineflower**

Parry's spineflower (*Chorizanthe parryi* var. *parryi*) is a tiny annual herb that grows in openings within chaparral and coastal sage scrub. It has been collected at elevations from 900 to 3,600 feet in dry sandy soils. It has a prostrate growth spreading habit and typically reaches a height of about 4 to 8 inches (10 to 20 cm). The flowers of Parry's spineflower are small, usually measuring less than 0.5 inches (1 cm) in diameter. They are arranged in dense clusters or spikes at the ends of the stems. The flower color can vary from greenish-white to pink or reddish. Each individual flower is tubular and has five petal-like lobes.The stems are reddish or purplish in color and covered in small hairs.It typically grows in coastal scrub, chaparral, and coastal sage scrub habitats, often in sandy or rocky soils. It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 1B.1.

**Long-spined Spineflower**

Long-spined Spineflower (*Chorizanthe polygonoides* var. *longispina*) occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, and vernal pools. It is often associated with claysoil from 100 to 5,000 feet. The long-spined spineflower is a perennial herb with a prostrate or spreading growth habit. It typically forms low mats or patches on the ground. The stems are slender, reddish or greenish, and covered in small hairs. The plant can reach a height of about 4 to 10 inches (10 to 25 cm). The flowers of the long-spined spineflower are small and arranged in dense clusters or spikes at the ends of the stems. Each flower is tubular with five petal-like lobes. The color of the flowers can vary from greenish-white to pinkish. As

the name suggests, the plant is characterized by its long, sharp spines that arise from the base of each flower. These spines can be up to 0.4 inches (1 cm) in length. It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 1B.2.

**Palmer's Grappling Hook**

Palmer's grappling hook (*Harpagonella palmeri*) is an annual herb with a low-growing and spreading growth habit. It typically reaches a height of about 4 to 12 inches (10 to 30 cm). The stems are slender, often reddish in color, and covered in fine hairs.The flowers of Palmer's combseed are small and inconspicuous. They are typically white to pale yellow in color and arranged in dense clusters or spikes at the tips of the stems. The individual flowers have a tubular shape with five lobes. This diminutive plant is distinguished from similar looking plants in the Borage Family by the fruit that resembles "grappling" hooks. It is not state or federally listed as Threatened or Endangered, but is CNPS ranked 4.2.

**Table 3. CNDDB and CNPS Rare Plant Results (within a 10 mile radius of Project)**

| Species (Scientific Name) | Species (Common Name) | Likelihood of Occurrence |
|---|---|---|
| *Arenaria paludicola* | Marsh Sandwort | Unlikely to Occur |
| *Astragalus hornii var. hornii* | Horn's Milk-Vetch | Unlikely to Occur |
| *Berberis nevinii* | Nevin's Barberry | Unlikely to Occur |
| *Brodiaea filifolia* | Thread-Leaved Brodiaea | Suitable Conditions for Occurrence |
| *Calochortus plummerae* | Plummer's Mariposa-Lily | Marginally Suitable Conditions for Occurrence |
| *Carex comosa* | Bristly Sedge | Marginally Suitable Conditions for Occurrence |
| *Centromadia pungens ssp. laevis* | smooth tarplant | Suitable Conditions for |

| Species (Scientific Name) | Species (Common Name) | Likelihood of Occurrence |
|---|---|---|
| | | Occurrence |
| *Chloropyron maritimum ssp. maritimum* | Salt Marsh Bird's-beak | Unlikely to Occur |
| *Chorizanthe parryi var. parryi* | Parry's Spineflower | Marginally Suitable Conditions for Occurrence |
| *Cuscuta obtusiflora var. glandulosa* | Peruvian Dodder | Unlikely to Occur |
| *Dodecahema leptoceras* | Slender-horned Spineflower | Marginally Suitable Conditions for Occurrence |
| *Eriastrum densifolium ssp. sanctorum* | Santa Ana River woollystar | Marginally Suitable Conditions for Occurrence |
| *Fimbristylis thermalis* | Hot Springs Fimbristylis | Unlikely to Occur |
| *Galium californicum ssp. primum* | Alvin Meadow Bedstraw | Unlikely to Occur |
| *Helianthus nuttallii ssp. parishii* | Los Angeles Sunflower | Unlikely to Occur |
| *Horkelia cuneata var. puberula* | Mesa Horkelia | Unlikely to Occur |
| *Imperata brevifolia* | California Satintail | Marginally Suitable Conditions for Occurrence |
| *Lepidium virginicum var. robinsonii* | Robinson's Pepper-grass | Marginally Suitable Conditions for Occurrence |
| *Malacothamnus parishii* | Parish's Bush-mallow | Unlikely to Occur |
| *Monardella pringlei* | Pringle's Monardella | Unlikely to Occur |
| *Nasturtium gambelii* | Gambel's Water cress | Unlikely to Occur |

| Species (Scientific Name) | Species (Common Name) | Likelihood of Occurrence |
|---|---|---|
| *Pelazoneuron puberulum var. sonorense* | Sonoran Maiden fern | Unlikely to Occur |
| *Ribes divaricatum var. parishii* | Parish's Gooseberry | Unlikely to Occur |
| *Schoenus nigricans* | Black Bog-rush | Unlikely to Occur |
| *Senecio aphanactis* | Chaparral Ragwort | Marginally Suitable Conditions for Occurrence |
| *Sidalcea malviflora ssp. dolosa* | Bear Valley Checkerbloom | Unlikely to Occur |
| *Sidalcea neomexicana* | Salt Spring Checkerbloom | Marginally Suitable Conditions for Occurrence |
| *Sphenopholis obtusata* | Prairie Wedge Grass | Unlikely to Occur |
| *Symphyotrichum defoliatum* | San Bernardino Aster | Marginally Suitable Conditions for Occurrence |

## 3.2 Field Surveys

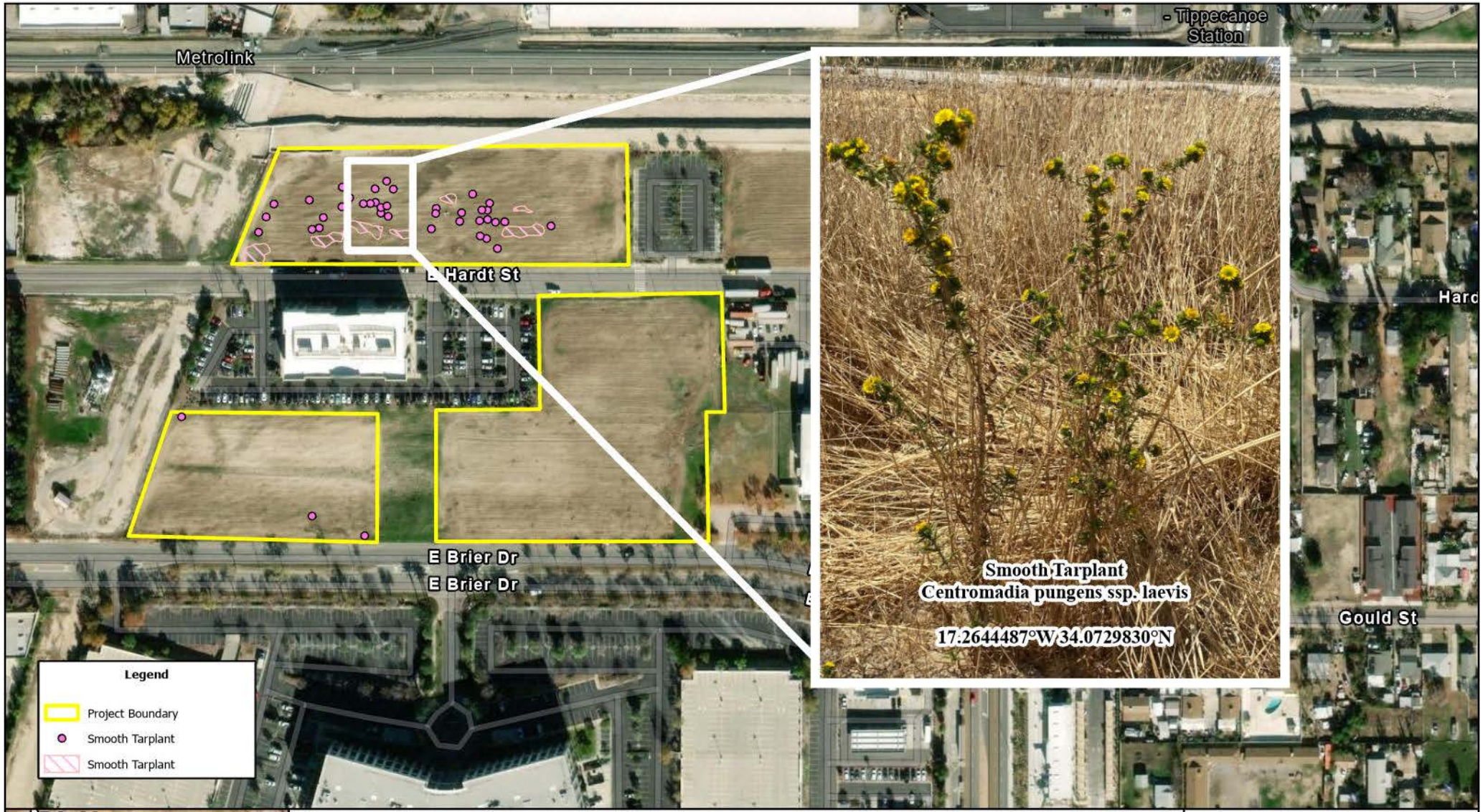
### 3.2.1 Vegetation

Vegetation community on the Project is considered to be non-native grassland. Evidence of construction impacts are visible in the form of dozer ripping and tilled soil. Dominant species consist of *Avena* spp., *Bromus* spp., *Hordeum murinum* and *Erodim*s spp. Adjacent areas have been disturbed and developed in the form of roads and buildings, with ornamental landscaping where vegetation occurs.

### 3.2.2 Rare Plants

Only one species of rare plant was observed and documented on the site, thee smooth tarplant (*Centromadia pungens ssp. laevis*). This species occurrence was anticipated due to previous

reports of an observation reported on CNDDB in year 2003. The smooth tarplant population is more expansive than previously documented with approximately 300 individuals detected, with the majority concentrated n the northern of the three parcels. The results of the documented smooth tarplant population can be viewed on Figure 4. Smooth tarplant is not state or federally listed as Threatened or Endangered, but is CNPS ranked 1.B1. No other rare plants were observed onsite and a comprehensive list of encountered species can viewed in Appendix A.



# Figure 4: Rare Plant Survey Results

**Hardt and Brier Project: Rare Plant Surveys**

2023

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

N

0 0.04 0.07 Mi

0 0.05 0.1 Km

## 4.0 CERTIFICATION

All biologists working under Huffman Environmental for the 2023 Hardt and Brier Rare Plant Surveys were qualified to survey for all sensitive plant species.

Their certification states that all information in this report and attached figures completely and accurately represent the work of each individual.

Please feel free to contact me at garrett@huffmanenvironmental.com if you have any questions regarding the contents of this report.

Cordially,

**Garrett Huffman**
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Huffman Environmental, LLC
(623) 238-1545
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**Ryan Meszaros**
Principal Botanist

## 5.0 REFERENCES


Baldwin, B.G., D.H. Goldman, and L.A. Vorobik. 2012. The Jepson Manual: Vascular Plants of California. University of California Press, Berkeley.

California Department of Fish and Wildlife. 2023.California Natural Diversity DataBase (Rarefind). Data available by subscription.

California NativePlant Society (CNPS). 2001. CNPS Botanical Survey Guidelines.

California Native Plant Society, Rare Plant Program. 2023. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Webste http://www.rareplants.cnps.org Accessed July 2023.

Calflora: Information on California plants for education, research and conservation. [web application]. 2022. Berkeley, California: The Calflora Database [a non-profit organization]. Available online at:

https://www.calflora.org/search.html. Accessed on July 1, 2023

Kennedy, M.P., and D.M. Morton.2003 Preiminary Geologic Map of the Murrieta 7.5 Quadrangle, Riverside County, California. U.S. Geological Survey Open-File Report 03-189. Washington, D.C.

Morton, Douglas M., and Kennedy, Michael P., 2003, Geologic Map of the Bachelor Mountain 7.5' Quadrangle, Riverside County, California: U.S. Geological Survey Open-File Report 03-103, U.S. Geological Survey, Menlo Park, Califoria.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California vegetation. Second edition. Calif. Native Plant Society Press, in collaboration with Calif. Fish and Game. Sacramento.

Soil Survey Staff, Natural Resorces Conservation Service, United States Department of Agriculture [a]. Soil Survey Geographic (SSURGO) Database for [French Valley, California]. Available online at: www.arcgis.com/apps/OePane/basicviewer/index.html?appid=a23eb436f6ec4ad6982000dbaddea5ea. Accessed: July, 2023.

# APPENDIX A

## FLORA OBSERVED

# Flora Observed

| Family | Species | Common Name |
|---|---|---|
| Amaranthacea | *Amaranthus albus* | White Tumbleweed |
| Apiaceae | *Cyclospermum leptophyllum* | Marsh-Parsley |
| Arecaceae | *Washingtonia robusta* | Mexican Fan Palm |
| Asteraceae | *Ambrosia acanthicarpa* | Annual Bur-Sage |
| Asteraceae | *Centromadia pungens* subsp. *laevis* | Smooth Tarplant |
| Asteraceae | *Deinandra fasciculata* | Fascicled Tarweed |
| Asteraceae | *Erigeron bonariensis* | Flax-Leaf Fleabane |
| Asteraceae | *Erigeron canadensis* | Horseweed |
| Asteraceae | *Helianthus annuus* | Western Sunflower |
| Asteraceae | *Heterotheca grandiflora* | Telegraph Weed |
| Asteraceae | *Lactuca serriola* | Prickly Lettuce |
| Asteraceae | *Oncosiphon piluliferum* | Stinknet |
| Asteraceae | *Pseudognaphalium luteoalbum* | Fragrant Everlasting Cudweed |
| Asteraceae | *Sonchus oleraceus* | Common Sow-Thistle |
| Asteraceae | *Stephanomeria sp.* | Wreath-Plant |
| Boraginaceae | *Amsinckia intermedia* | Rancher's Fiddleneck |
| Boraginaceae | *Amsinckia menziesii* | Rigid Fiddleneck |
| Brassicaceae | *Brassica tournefortii* | Sahara Mustard |
| Brassicaceae | *Sisymbrium irio* | London Rocket |
| Caryophyllacea | *Polycarpon tetraphyllum* subsp. | Four-Leaf Allseed |
| Caryophyllacea | *Silene gallica* | Common Catchfly |
| Caryophyllacea | *Spergularia bocconi* | Boccone's Sand-Spurrey |
| Chenopodiacea | *Atriplex argentea* var. *expansa* | Mojave Silverscale |
| Chenopodiacea | *Bassia hyssopifolia* | Five-Hook Bassia |
| Chenopodiacea | *Chenopodium album* | Lamb's Quarters |
| Chenopodiacea | *Chenopodium missouriense* | Missouri Lambsquarters |
| Chenopodiacea | *Chenopodium murale* | Nettle-Leaf Goosefoot |
| Chenopodiacea | *Salsola tragus* | Prickly Russian-Thistle, Tumbleweed |
| Cyperaceae | *Cyperus eragrostis* | Tall Flatsedge |
| Euphorbiaceae | *Euphorbia maculata* | Spotted Spurge |
| Euphorbiaceae | *Ricinus communis* | Castor Bean |
| Fabaceae | *Medicago polymorpha* | California Burclover |

| | | |
|---|---|---|
| Fabaceae | *Melilotus indicus* | Indian Sweetclover |
| Geraniaceae | *Erodium botrys* | Long-Beak Filaree/Storksbill |
| Geraniaceae | *Erodium cicutarium* | Red-Stem Filaree/Storksbill |
| Heliotropiacea | *Heliotropium curassavicum* var. *oculatum* | Salt Heliotrope |
| Juncaceae | *Juncus bufonius* var. *congestus* | Clustered Toad Rush |
| Lamiaceae | *Marrubium vulgare* | Horehound |
| Malvaceae | *Malva parviflora* | Cheeseweed |
| Myrsinaceae | *Lysmachia arvensis* | Scarlet Pimpernel, Poor Man's |
| Poaceae | *Avena fatua* | Wild Oat |
| Poaceae | *Bromus catharticus* var. *catharticus* | Rescue Grass |
| Poaceae | *Bromus diandrus* | Ripgut Grass |
| Poaceae | *Bromus rubens* | Foxtail Chess, Red Brome |
| Poaceae | *Cenchrus clandestinus* | Kikuyu Grass |
| Poaceae | *Cenchrus setaceus* | African Fountain Grass |
| Poaceae | *Cynodon dactylon* | Bermuda Grass |
| Poaceae | *Echinochloa colona* | Jungle-Rice |
| Poaceae | *Hordeum murinum* | Foxtail |
| Poaceae | *Phalaris minor* | Little-Seed Canary Grass |
| Poaceae | *Polypogon monspeliensis* | Annual Beard Grass |
| Poaceae | *Polypogon viridis* | Water Beardgrass |
| Poaceae | *Schismus barbatus* | Mediterranean Schismus |
| Polygonaceae | *Polygonum aviculare* | Prostrate Knotweed |
| Portulacaceae | *Portulaca oleracea* | Common Purslane |
| Rubiaceae | *Galium aparine* | Common Bedstraw, Goose Grass |
| Salicaceae | *Salix gooddingii* | Goodding's Black Willow |
| Solanaceae | *Datura wrightii* | Western Jimson Weed |
| Solanaceae | *Solanum nigrum* | Black Nightshade |
| Zygophyllaceae | *Tribulus terrestris* | Puncture Vine |

# APPENDIX B

SITE PHOTOS

## APPENDIX B

## Site Photographs

**Photograph 1**. Photo of CNPS ranked 4.2, smooth tarplant (*Centromadia pungens ssp. laevis*)

**Photograph 2.** Photo of distinguishing features of smooth tarplant (*Centromadia pungens ssp. laevis*) documented onsite.

**Photograph 3.** Photo of smooth tarplant (*Centromadia pungens ssp. laevis*) flower petals.

**Photograph 4.** Photo from northern parcel looking east over the survey area.

**Photograph 5.** Photo from northern parcel looking north over survey area.

# APPENDIX C

CNDDB 9-QUAD

SEARCH RESULTS

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Quad IS (Redlands (3411712) OR Harrison Mtn. (3411722) OR San Bernardino North (3411723) OR Sunnymead (3311782) OR Riverside East (3311783) OR Riverside West (3311784) OR Fontana (3411714) OR Devore (3411724))<br /> AND Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Allium howellii var. clokeyi***<br>Mt. Pinos onion | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.3<br>SB_SBBG-Santa Barbara Botanic Garden<br>USFS_S-Sensitive | 5,100<br>5,100 | 25<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Ambrosia monogyra***<br>singlewhorl burrobrush | G5<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | 1,550<br>1,550 | 30<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Ambrosia pumila***<br>San Diego ambrosia | G1<br>S1 | Endangered<br>None | Rare Plant Rank - 1B.1<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | | 61<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Arenaria paludicola***<br>marsh sandwort | G1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_SBBG-Santa Barbara Botanic Garden | 1,000<br>1,000 | 19<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Berberis nevinii***<br>Nevin's barberry | G1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_SBBG-Santa Barbara Botanic Garden | 1,020<br>5,200 | 32<br>S:5 | 0 | 0 | 0 | 2 | 1 | 2 | 4 | 1 | 4 | 0 | 1 |
| ***Brodiaea filifolia***<br>thread-leaved brodiaea | G2<br>S2 | Threatened<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | 1,900<br>1,900 | 141<br>S:2 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Calochortus palmeri var. palmeri***<br>Palmer's mariposa-lily | G3T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_SBBG-Santa Barbara Botanic Garden<br>USFS_S-Sensitive | 1,700<br>6,000 | 111<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Calochortus plummerae***<br>Plummer's mariposa-lily | G4<br>S4 | None<br>None | Rare Plant Rank - 4.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 900<br>5,000 | 230<br>S:28 | 0 | 3 | 1 | 1 | 0 | 23 | 11 | 17 | 28 | 0 | 0 |
| ***Castilleja lasiorhyncha***<br>San Bernardino Mountains owl's-clover | G2?<br>S2? | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | | 46<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Centromadia pungens ssp. laevis***<br>smooth tarplant | G3G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 1,000<br>1,520 | 137<br>S:6 | 1 | 0 | 1 | 0 | 0 | 4 | 5 | 1 | 6 | 0 | 0 |
| ***Chloropyron maritimum ssp. maritimum***<br>salt marsh bird's-beak | G4?T1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank<br>SB_SBBG-Santa Barbara Botanic Garden | 1,000<br>1,000 | 26<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Chorizanthe parryi var. parryi***<br>Parry's spineflower | G3T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | 900<br>2,500 | 150<br>S:26 | 0 | 3 | 1 | 0 | 2 | 20 | 16 | 10 | 24 | 2 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Chorizanthe xanti var. leucotheca***<br>white-bracted spineflower | G4T3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_USDA-US Dept of Agriculture<br>USFS_S-Sensitive | 2,100<br>2,700 | 59<br>S:4 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 3 | 4 | 0 | 0 |
| ***Cuscuta obtusiflora var. glandulosa***<br>Peruvian dodder | G5T4?<br>SH | None<br>None | Rare Plant Rank - 2B.2 | | 6<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Dodecahema leptoceras***<br>slender-horned spineflower | G1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 1,280<br>2,400 | 42<br>S:11 | 0 | 2 | 1 | 0 | 3 | 5 | 9 | 2 | 8 | 2 | 1 |
| ***Eriastrum densifolium ssp. sanctorum***<br>Santa Ana River woollystar | G4T1<br>S1 | Endangered<br>Endangered | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 790<br>2,000 | 31<br>S:13 | 2 | 2 | 5 | 0 | 3 | 1 | 5 | 8 | 10 | 1 | 2 |
| ***Fimbristylis thermalis***<br>hot springs fimbristylis | G4<br>S1S2 | None<br>None | Rare Plant Rank - 2B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 1,900<br>1,900 | 19<br>S:1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Heuchera parishii***<br>Parish's alumroot | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.3<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | | 70<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Horkelia cuneata var. puberula***<br>mesa horkelia | G4T1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | 1,300<br>1,400 | 103<br>S:4 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 0 | 2 | 2 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks A | B | C | D | X | U | Population Status Historic > 20 yr | Recent <= 20 yr | Presence Extant | Poss. Extirp. | Extirp. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***Imperata brevifolia***<br>California satintail | G3<br>S3 | None<br>None | Rare Plant Rank - 2B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_SBBG-Santa Barbara Botanic Garden<br>USFS_S-Sensitive | 1,480<br>1,950 | 32<br>S:3 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 1 | 3 | 0 | 0 |
| ***Ivesia argyrocoma var. argyrocoma***<br>silver-haired ivesia | G2T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | 5,620<br>5,620 | 41<br>S:1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Lasthenia glabrata ssp. coulteri***<br>Coulter's goldfields | G4T2<br>S2 | None<br>None | Rare Plant Rank - 1B.1<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_SBBG-Santa Barbara Botanic Garden | 1,200<br>1,450 | 111<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Lepidium virginicum var. robinsonii***<br>Robinson's pepper-grass | G5T3<br>S3 | None<br>None | Rare Plant Rank - 4.3 | 850<br>1,800 | 142<br>S:7 | 0 | 0 | 0 | 0 | 0 | 7 | 6 | 1 | 7 | 0 | 0 |
| ***Lilium parryi***<br>lemon lily | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank<br>USFS_S-Sensitive | 4,700<br>4,700 | 160<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Lycium parishii***<br>Parish's desert-thorn | G4<br>S1 | None<br>None | Rare Plant Rank - 2B.3<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | | 21<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |
| ***Malacothamnus parishii***<br>Parish's bush-mallow | GXQ<br>SX | None<br>None | Rare Plant Rank - 1A | 1,250<br>1,250 | 1<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Monardella macrantha ssp. hallii***<br>Hall's monardella | G5T3<br>S3 | None<br>None | Rare Plant Rank - 1B.3<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | 4,600<br>4,600 | 41<br>S:1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Monardella pringlei***<br>Pringle's monardella | GX<br>SX | None<br>None | Rare Plant Rank - 1A | 1,000<br>1,000 | 2<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Opuntia basilaris var. brachyclada***<br>short-joint beavertail | G5T3<br>S3 | None<br>None | Rare Plant Rank - 1B.2<br>BLM_S-Sensitive<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | 3,000<br>3,000 | 199<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Pelazoneuron puberulum var. sonorense***<br>Sonoran maiden fern | G5T3<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>USFS_S-Sensitive | 2,000<br>2,000 | 27<br>S:1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| ***Perideridia parishii ssp. parishii***<br>Parish's yampah | G4T3T4<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 5,600<br>6,000 | 37<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 0 |
| ***Phacelia stellaris***<br>Brand's star phacelia | G1<br>S1 | None<br>None | Rare Plant Rank - 1B.1<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 750<br>750 | 15<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Ribes divaricatum var. parishii***<br>Parish's gooseberry | G5TX<br>SX | None<br>None | Rare Plant Rank - 1A | 1,080<br>1,080 | 5<br>S:1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| ***Schoenus nigricans***<br>black bog-rush | G4<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>IUCN_LC-Least Concern<br>USFS_S-Sensitive | 1,950<br>1,950 | 13<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 |
| ***Senecio aphanactis***<br>chaparral ragwort | G3<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank | 2,300<br>2,300 | 98<br>S:2 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 0 | 0 |

# Summary Table Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

| Name (Scientific/Common) | CNDDB Ranks | Listing Status (Fed/State) | Other Lists | Elev. Range (ft.) | Total EO's | Element Occ. Ranks | | | | | | Population Status | | Presence | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | A | B | C | D | X | U | Historic > 20 yr | Recent <= 20 yr | Extant | Poss. Extirp. | Extirp. |
| ***Sidalcea malviflora ssp. dolosa***<br>Bear Valley checkerbloom | G5T2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>USFS_S-Sensitive | | 18<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Sidalcea neomexicana***<br>salt spring checkerbloom | G4<br>S2 | None<br>None | Rare Plant Rank - 2B.2<br>USFS_S-Sensitive | 1,500<br>1,500 | 30<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Sphenopholis obtusata***<br>prairie wedge grass | G5<br>S2 | None<br>None | Rare Plant Rank - 2B.2 | 800<br>800 | 19<br>S:1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| ***Streptanthus bernardinus***<br>Laguna Mountains jewelflower | G3G4<br>S3S4 | None<br>None | Rare Plant Rank - 4.3<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden | 5,400<br>5,990 | 22<br>S:2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 |
| ***Streptanthus campestris***<br>southern jewelflower | G3<br>S3 | None<br>None | Rare Plant Rank - 1B.3<br>BLM_S-Sensitive<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank<br>USFS_S-Sensitive | 4,489<br>6,200 | 73<br>S:2 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 0 | 0 |
| ***Symphyotrichum defoliatum***<br>San Bernardino aster | G2<br>S2 | None<br>None | Rare Plant Rank - 1B.2<br>SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden<br>SB_CRES-San Diego Zoo CRES Native Gene Seed Bank<br>USFS_S-Sensitive | 1,000<br>2,000 | 102<br>S:3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 3 | 0 | 0 |

# APPENDIX D

CNPS 9-QUAD

SEARCH RESULTS

| ScientificName | CommonName | Family | CRPR |
|---|---|---|---|
| Abronia villosa var. aurita | chaparral sand-verbena | Nyctaginaceae | 1B.1 |
| Acanthoscyphus parishii var. parishii | Parish's oxytheca | Polygonaceae | 4.2 |
| Allium howellii var. clokeyi | Mt. Pinos onion | Alliaceae | 1B.3 |
| Ambrosia monogyra | singlewhorl burrobrush | Asteraceae | 2B.2 |
| Ambrosia pumila | San Diego ambrosia | Asteraceae | 1B.1 |
| Arenaria paludicola | marsh sandwort | Caryophyllaceae | 1B.1 |
| Artemisia palmeri | San Diego sagewort | Asteraceae | 4.2 |
| Asplenium vespertinum | western spleenwort | Aspleniaceae | 4.2 |
| Astragalus hornii var. hornii | Horn's milk-vetch | Fabaceae | 1B.1 |
| Berberis nevinii | Nevin's barberry | Berberidaceae | 1B.1 |
| Brodiaea filifolia | thread-leaved brodiaea | Themidaceae | 1B.1 |
| Calochortus catalinae | Catalina mariposa lily | Liliaceae | 4.2 |
| Calochortus palmeri var. palmeri | Palmer's mariposa-lily | Liliaceae | 1B.2 |
| Calochortus plummerae | Plummer's mariposa-lily | Liliaceae | 4.2 |
| Calochortus simulans | La Panza mariposa-lily | Liliaceae | 1B.3 |
| Carex comosa | bristly sedge | Cyperaceae | 2B.1 |
| Castilleja lasiorhyncha | San Bernardino Mountains owl's-clover | Orobanchaceae | 1B.2 |
| Caulanthus simulans | Payson's jewelflower | Brassicaceae | 4.2 |
| Centromadia pungens ssp. laevis | smooth tarplant | Asteraceae | 1B.1 |
| Chloropyron maritimum ssp. maritimun | salt marsh bird's-beak | Orobanchaceae | 1B.2 |
| Chorizanthe leptotheca | Peninsular spineflower | Polygonaceae | 4.2 |
| Chorizanthe parryi var. parryi | Parry's spineflower | Polygonaceae | 1B.1 |
| Chorizanthe xanti var. leucotheca | white-bracted spineflower | Polygonaceae | 1B.2 |
| Convolvulus simulans | small-flowered morning-glory | Convolvulaceae | 4.2 |
| Cryptantha incana | Tulare cryptantha | Boraginaceae | 1B.3 |
| Cuscuta obtusiflora var. glandulosa | Peruvian dodder | Convolvulaceae | 2B.2 |
| Deinandra paniculata | paniculate tarplant | Asteraceae | 4.2 |
| Dodecahema leptoceras | slender-horned spineflower | Polygonaceae | 1B.1 |
| Eriastrum densifolium ssp. sanctorum | Santa Ana River woollystar | Polemoniaceae | 1B.1 |
| Eriophyllum lanatum var. obovatum | southern Sierra woolly sunflower | Asteraceae | 4.3 |
| Fimbristylis thermalis | hot springs fimbristylis | Cyperaceae | 2B.2 |

| | | | |
|---|---|---|---|
| Frasera neglecta | pine green-gentian | Gentianaceae | 4.3 |
| Fritillaria pinetorum | pine fritillary | Liliaceae | 4.3 |
| Galium californicum ssp. primum | Alvin Meadow bedstraw | Rubiaceae | 1B.2 |
| Galium jepsonii | Jepson's bedstraw | Rubiaceae | 4.3 |
| Galium johnstonii | Johnston's bedstraw | Rubiaceae | 4.3 |
| Helianthus nuttallii ssp. parishii | Los Angeles sunflower | Asteraceae | 1A |
| Heuchera caespitosa | urn-flowered alumroot | Saxifragaceae | 4.3 |
| Heuchera parishii | Parish's alumroot | Saxifragaceae | 1B.3 |
| Hordeum intercedens | vernal barley | Poaceae | 3.2 |
| Horkelia cuneata var. puberula | mesa horkelia | Rosaceae | 1B.1 |
| Hulsea vestita ssp. parryi | Parry's sunflower | Asteraceae | 4.3 |
| Imperata brevifolia | California satintail | Poaceae | 2B.1 |
| Ivesia argyrocoma var. argyrocoma | silver-haired ivesia | Rosaceae | 1B.2 |
| Juglans californica | Southern California black walnut | Juglandaceae | 4.2 |
| Juncus duranii | Duran's rush | Juncaceae | 4.3 |
| Lasthenia glabrata ssp. coulteri | Coulter's goldfields | Asteraceae | 1B.1 |
| Lepidium virginicum var. robinsonii | Robinson's pepper-grass | Brassicaceae | 4.3 |
| Lilium humboldtii ssp. ocellatum | ocellated Humboldt lily | Liliaceae | 4.2 |
| Lilium parryi | lemon lily | Liliaceae | 1B.2 |
| Lycium parishii | Parish's desert-thorn | Solanaceae | 2B.3 |
| Malacothamnus parishii | Parish's bush-mallow | Malvaceae | 1A |
| Monardella macrantha ssp. hallii | Hall's monardella | Lamiaceae | 1B.3 |
| Monardella pringlei | Pringle's monardella | Lamiaceae | 1A |
| Monardella saxicola | rock monardella | Lamiaceae | 4.2 |
| Muhlenbergia californica | California muhly | Poaceae | 4.3 |
| Nasturtium gambelii | Gambel's water cress | Brassicaceae | 1B.1 |
| Opuntia basilaris var. brachyclada | short-joint beavertail | Cactaceae | 1B.2 |
| Pelazoneuron puberulum var. sonorens | Sonoran maiden fern | Thelypteridaceae | 2B.2 |
| Perideridia parishii ssp. parishii | Parish's yampah | Apiaceae | 2B.2 |
| Phacelia mohavensis | Mojave phacelia | Hydrophyllaceae | 4.3 |
| Phacelia stellaris | Brand's star phacelia | Hydrophyllaceae | 1B.1 |
| Piperia leptopetala | narrow-petaled rein orchid | Orchidaceae | 4.3 |

| | | | |
|---|---|---|---|
| Quercus durata var. gabrielensis | San Gabriel oak | Fagaceae | 4.2 |
| Ribes divaricatum var. parishii | Parish's gooseberry | Grossulariaceae | 1A |
| Romneya coulteri | Coulter's matilija poppy | Papaveraceae | 4.2 |
| Schoenus nigricans | black bog-rush | Cyperaceae | 2B.2 |
| Senecio aphanactis | chaparral ragwort | Asteraceae | 2B.2 |
| Senecio astephanus | San Gabriel ragwort | Asteraceae | 4.3 |
| Sidalcea malviflora ssp. dolosa | Bear Valley checkerbloom | Malvaceae | 1B.2 |
| Sidalcea neomexicana | salt spring checkerbloom | Malvaceae | 2B.2 |
| Sidotheca caryophylloides | chickweed oxytheca | Polygonaceae | 4.3 |
| Sphenopholis obtusata | prairie wedge grass | Poaceae | 2B.2 |
| Streptanthus bernardinus | Laguna Mountains jewelflower | Brassicaceae | 4.3 |
| Streptanthus campestris | southern jewelflower | Brassicaceae | 1B.3 |
| Symphyotrichum defoliatum | San Bernardino aster | Asteraceae | 1B.2 |
| Yucca brevifolia | | | CBR |

# APPENDIX E

SOILS MAP

Map Scale: 1:20,900 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 300 600 1200 1800

Feet: 0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

**Special Point Features**

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

**Water Features**

Streams and Canals

**Transportation**

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 14, Sep 6, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 17, 2022—Jun 12, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| Gr | Grangeville fine sandy loam, warm MAAT, MLRA 19 | 315.9 | 19.4% |
| Gs | Grangeville fine sandy loam, saline-alkali | 515.8 | 31.7% |
| HaC | Hanford coarse sandy loam, 2 to 9 percent slopes | 70.5 | 4.3% |
| HbA | Hanford sandy loam, 0 to 2 percent slopes | 412.9 | 25.4% |
| Ps | Psamments, Fluvents and Frequently flooded soils | 84.5 | 5.2% |
| ScA | San Emigdio fine sandy loam, 0 to 2 percent slopes | 28.2 | 1.7% |
| TuB | Tujunga loamy sand, 0 to 5 percent slopes | 72.2 | 4.4% |
| TvC | Tujunga gravelly loamy sand, 0 to 9 percent slopes | 126.1 | 7.8% |
| **Totals for Area of Interest** | | **1,626.1** | **100.0%** |